Internal Use Only

Service Manual

LG-E405

Date: May, 2012 /Issue 1.0

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1. INTRODUCTION

1.1 Purpose

This manual provides the information necessary to repair, calibration, description and download the features of this model.

1.2 Regulatory Information

A. Security

Toll fraud, the unauthorized use of telecommunications system by an unauthorized part (for example, persons other than your company's employees, agents, subcontractors, or person working on your company's behalf) can result in substantial additional charges for your telecommunications services. System users are responsible for the security of own system. There are may be risks of toll fraud associated with your telecommunications system. System users are responsible for programming and configuring the equipment to prevent unauthorized use. The manufacturer does not warrant that this product is immune from the above case but will prevent unauthorized use of common carrier telecommunication service of facilities accessed through or connected to it. The manufacturer will not be responsible for any charges that result from such unauthorized use.

B. Incidence of Harm

If a telephone company determines that the equipment provided to customer is faulty and possibly causing harm or interruption in service to the telephone network, it should disconnect telephone service until repair can be done. A telephone company may temporarily disconnect service as long as repair is not done.

C. Changes in Service

A local telephone company may make changes in its communications facilities or procedure. If these changes could reasonably be expected to affect the use of the phones or compatibility with the net work, the telephone company is required to give advanced written notice to the user, allowing the user to take appropriate steps to maintain telephone service.

D. Maintenance Limitations

Maintenance limitations on the phones must be performed only by the manufacturer or its authorized agent. The user may not make any changes and/or repairs expect as specifically noted in this manual. Therefore, note that unauthorized alternations or repair may affect the regulatory status of the system and may void any remaining warranty.

E. Notice of Radiated Emissions

This model complies with rules regarding radiation and radio frequency emission as defined by local regulatory agencies. In accordance with these agencies, you may be required to provide information such as the following to the end user.

F. Pictures

The pictures in this manual are for illustrative purposes only; your actual hardware may look slightly different.

G. Interference and Attenuation

A phone may interfere with sensitive laboratory equipment, medical equipment, etc. Interference from unsuppressed engines or electric motors may cause problems.

H. Electrostatic Sensitive Devices

ATTENTION

Boards, which contain Electrostatic Sensitive Device (ESD), are indicated by the  **sign.**

Following information is ESD handling:

• Service personnel should ground themselves by using a wrist strap when exchange system boards. • When repairs are made to a system board, they should spread the floor with anti-static mat which is also grounded.

• Use a suitable, grounded soldering iron. • Keep sensitive parts in these protective packages until these are used.

• When returning system boards or parts like EEPROM to the factory, use the protective package as described.

2. PERFORMANCE

2.1 Product Name

LG-E405 : WCDMA900/2100+EGSM/GSM850/DCS/PCS

(HSDPA 3.6Mbps / GPRS Class 12 / EDGE Class 12 but Rx only)

2.2 Supporting Standard

Item	Feature	Comment
Supporting Standard	WCDMA(FDD1,8)/EGSM/GSM850/DCS1800/PCS1900 with seamless handover Phase 2+(include AMR)	
Frequency Range	WCDMA(FDD1) TX : 1920 – 1980 MHz WCDMA(FDD1) RX : 2110 – 2170 MHz WCDMA(FDD8) TX : 880 - 915 MHz WCDMA(FDD8) RX : 925 – 960 MHz EGSM TX : 880 – 915 MHz EGSM RX : 925 – 960 MHz GSM850 TX : 824 – 849 MHz GSM850 RX : 869 – 894 MHz DCS1800 TX : 1710 – 1785 MHz DCS1800 RX : 1805 – 1880 MHz PCS1900 TX : 1850 – 1910 MHz PCS1900 RX : 1930 – 1990 MHz	
Application Standard	WAP 2.0	

2.3 Main Parts : GSM Solution

Item	Part Name	Comment
Digital Baseband	MSM7225A: Qualcomm	
Analog Baseband	PM8029 : Qualcomm	
RF Chip	RTR6285A : Qualcomm	

2.4 HW Features

Item		Feature	Comment
Form Factor		DOP type	
Battery		1) Capacity Standard : Li-Ion, 1500mAh	
		2) Packing Type : Soft Pack	
Size		Standard : 102.6X 61.6X11.85 mm	
Weight		108.46g	With Battery
RX sensitivity		WCDMA(FDD1) : -106.7 dBm WCDMA(FDD8) : -103.7 dBm EGSM : -105dBm GSM850 : -105 dBm DCS 1800 : -105 dBm PCS 1900 : -105 dBm	
TX output power		WCDMA/22.5dBm/3.84MHz,+1/-3dBm GSM850, EGSM : 32.5dBm DCS1800, PCS1900 : 29.5dBm GPRS	Class3(WCDMA) Class4 (GSM850,EGSM) Class1 (DCS, PCS)
EDGE compatibility		GPRS Class 12	
SIM card type	EDGE Class 12		Class3(WCDMA) Class4 (EGSM) Class4 (GSM850) Class1 (PCS) Class1 (DCS)
	Plug-In SIM 3V /1.8V		E2 (GSM900) E2 (PCS) E2 (DCS)
Display		Main LCD TFT Main LCD(3.2 inch, 320 x 480)	
Built-in Camera		3M CMOS Camera	
Status Indicator		Yes	
Keypad		Full Touch Screen Side Key : 3	Side Key : Power On Volume up/down
ANT		Main : Internal Fixed Type	
System connector		5 Pin u-USB	

Ear Phone Jack	3.5 pi type	
PC synchronization	Yes	
Memory	eMMC : 2GB SDRAM : 3Gb	
Speech coding	FR, EFR, HR,AMR	
Vibrator	Built in Vibrator	
Blue Tooth	Bluetooth 3.0+EDR	
MIDI(for Buzzer Function)	SW Decoded 72Poly	
Music Player	MP3/WMA/AAC/MIDI/EAAC+/HE AAC/OGG	
Video Player	MPEG4, H.264	
Camcorder	MPEG4 or H.263	
Voice Recording	Yes	
Speaker Phone mode Support	Yes	
Travel Adapter	Yes	
CDROM	No	
Stereo Headset	Yes	
Data Cable	Yes	
T-Flash (External Memory)	Yes (Up to 32GB)	

1) RSSI Display

RSSI BAR	WCDMA	GSM
BAR 4 --> 3	-89 ± 2dBm	-91 ± 2dBm
BAR 3 --> 2	-97 ± 2dBm	-99 ± 2dBm
BAR 2 --> 1	-105 ± 2dBm	-104 ± 2dBm
BAR 1 --> 0	-110 ± 2dBm	-106 ± 2dBm

Measure RSSI after 10 seconds if you change power.

2) Charging Time

210 minutes under

3) Travel Charger

Input : 100 ~ 240 V, 50/60 Hz

Output : 5.1V, 700 mA

4) Battery Type

Li-ion Battery Pack, 1500 mAh

Standard Voltage : 3.7 V, Battery Full Charge Voltage : 4.1V ~ 4.2V

5) Current Consumption

	Stand by		Voice Call	Measurement Condition
	Bluetooth Off	Bluetooth Connected		
WCDMA+GSM	7 mA under, =214 hours over (DRX=7, PP=5)	10 mA under =150 hours over (DRX=7, PP=5)	300mA under =300 min over (Tx=12dBm)	LCD Backlight off
GSM+GSM	4.5 mA under =333 hours over (PP5, PP=5)	7.5 mA under =200 hours over (PP5, PP=5)	330mA under =270 min over (Tx=Max)	LCD Backlight off
WCDMA only	3.0 mA under =500 hours over (DRX=7)	6 mA under =250 hours over (DRX=7)	300mA under =300 min over (Tx=12dBm)	Measure standby current after 10 minutes after backlight off.

6) Battery Bar

Battery Bar	Specification	Unit	Battery Bar	Specification	Unit
BAR 20 (Full)	OVER 98%	Soc %	BAR 9 -> 8	43% → 42%	Soc %
BAR 20 -> 19	98% → 97%		BAR 8 -> 7	38% → 37%	
BAR 19 -> 18	93% → 92%		BAR 7 -> 6	33% → 32%	
BAR 18 -> 17	88% → 87%		BAR 6 -> 5	28% → 27%	
BAR 17 -> 16	83% → 82%		BAR 5 -> 4	23% → 22%	
BAR 16 -> 15	78% → 77%		BAR 4 -> 3	18% → 17%	
BAR 15 -> 14	73% → 72%		BAR 3 -> 2	13% → 12%	
BAR 14 -> 13	68% → 67%		BAR 2 -> 1	8% → 7%	
BAR 13 -> 12	63% → 62%		BAR 1 -> 0	3% → 2%	
BAR 12 -> 11	58% → 57%		Low Battery Pop-up	4% ~ 15% : One Time popup (No call)	
BAR 11 -> 10	53% → 52%		Critical Low Battery Pop-up	0% ~ 3% : Every Level change popup (No call)	
BAR 10 -> 9	48% → 47%		POWER OFF	Below 1%	

2.5 SW Features

Item	Feature	Comment
RSSI	0 ~ 4 Levels	
Battery Charging	0 ~ 20 Levels	
Key Volume	0 ~ 7 Level	
Audio Volume	0 ~ 7 Level	
Time / Date Display	Yes	
Multi-Language	Yes	English/French/German/Spanish/Italian/Danish/Dutch/Korean
Quick Access Mode	Dialing/ Contact /Message/Menu	The user can edit as desired icon. (Menu icon excluded) Icon on the menu is the LONG-PRESS. DRAG icon to where you want to register.
PC Sync	Yes	
Speed Dial	Yes	
Profile	Yes	not same with feature phone setting
CLIP / CLIR	Yes	
Phone Book	Name / Number / Email / Website/Postal addresses/Organizations/Groups/ Birthday / Ringtone	There is no limitation on the number of items. It depends on available memory amount. Ringtone can be specified in the detail view screen.
Last Dial Number	Yes	Last Dial Numbers, Last Received Numbers and Last Missed Numbers can store up to a total of 500.
Last Received Number	Yes	Last Dial Numbers, Last Received Numbers and Last Missed Numbers can store up to a total of 500.
Last Missed Number	Yes	Last Dial Numbers, Last Received Numbers and Last Missed Numbers can store up to a total of 500.
Search by Number / Name	Name	
Group	Yes	There is no limitation on the number of items. It depends on available memory amount.

Fixed Dial Number	Yes	
Service Dial Number	No	
Own Number	Yes	Read only (add/edit/delete are not supported)
Voice Memo	Yes	
Call Reminder	No	
Network Selection	Automatic	
Mute	Yes	
Call Divert	Yes	
Call Barring	Yes	
Call Charge (AoC)	Yes	
Call Duration	Yes	
SMS (EMS)	There is no limitation on the number of items. It depends on available memory amount.	EMS does not support.
SMS Over GPRS	No	
EMS Melody / Picture	No	
Send / Receive / Save	No	
MMS MPEG4 Send / Receive / Save	Yes	
Long Message	MAX 2000 characters	
Cell Broadcast	Yes	
Download	Over the Web	
Game	No	
Calendar	Yes	
Memo	No	
World Clock	No	
Unit Convert	No	

Stop Watch	No	
Wall Paper	Yes	
WAP Browser	No	Support only web browser based on webkit. WAP stack and wml are not supported.
Download Melody / Wallpaper	Yes	Over web browser
SIM Lock	Yes	Operator Dependent
SIM Toolkit	Class 1, 2, 3, C	
MMS	Yes	Google MMS Client
EONS	Yes	
CPHS	Yes	V4.2
ENS	No	
Camera	Yes	3M FF / Digital Zoom : x4
JAVA	No	
Voice Dial	No	
IrDa	No	
Bluetooth	Yes	Ver. 3.0
FM radio	Yes	
GPRS	Yes	Class 12
EDGE	Yes	Class 12
Hold / Retrieve	Yes	
Conference Call	Yes	Max. 6
DTMF	Yes	
Memo pad	No	
TTY	No	
AMR	Yes	
SyncML	Yes	
IM	No	
Email	Yes	

2.6 HW SPEC.

1) GSM transceiver specification

Item	Specification
Phase Error	Rms : 5° Peak : 20 °
Frequency Error	GSM : 0.1 ppm DCS/PCS : 0.1 ppm
EMC(Radiated Spurious Emission Disturbance)	GSM/DCS : < -28dBm
Transmitter Output power and Burst Timing	GSM : 5dBm – 33dBm ± 3dB DCS/PCS : 0dBm – 30dBm ± 3dB
Burst Timing	<3.69us
Spectrum due to modulation out to less than 1800kHz offset	200kHz : -36dBm 600kHz : -51dBm/-56dBm
Spectrum due to modulation out to larger than 1800kHz offset to the edge of the transmit band	GSM : 1800-3000kHz :< -63dBc(-46dBm) 3000kHz-6000kHz : <-65dBc(-46dBm) 6000kHz < : < -71dBc(-46dBm) DCS : 1800-3000kHz :< -65dBc(-51dBm) 6000kHz < : < -73dBc(-51dBm)
Spectrum due to switching transient	400kHz : -19dBm/-22dBm(5/0), -23dBm 600kHz : -21dBm/-24dBm(5/0), -26dBm
Reference Sensitivity – TCH/FS	Class II(RBER) : -105dBm(2.439%)
Usable receiver input level range	0.012(-15 - -40dBm)
Intermodulation rejection – Speech channels	± 800kHz, ± 1600kHz : -98dBm/-96dBm (2.439%)
AM Suppression – GSM : -31dBm - DCS : -29dBm	-98dBm/-96dBm (2.439%)
Timing Advance	± 0.5T

2) WCDMA transmitter specification

Item	Specification
Transmit Frequency	Band1 : 1920 MHz ~ 1980 MHz Band8 : 880 - 915 MHz
Maximum Output Power	+22.5 dBm / 3.84 MHz, +1 / -3 dB
Frequency Error	within ±0.1 PPM
Open Loop Power Control	Normal Conditions : within ±9 dB, Extreme Conditions : within ±12 dB
Minimum Transmit Power	< -50 dBm /3.84 MHz
Occupied Bandwidth	< 5 MHz at 3.84 Mcps (99% of power)
Adjacent Channel Leakage Power Ratio (ACLR)	> 33 dB @ ±5 MHz, > 43 dB @ ±10 MHz
Spurious Emissions |f-fc| > 12.5 MHz	< -36 dBm / 1 kHz RW @ 9 kHz ≤ f < 150 kHz < -36 dBm / 10 kHz RW @ 150 KHz ≤ f < 30 MHz < -36 dBm / 100 kHz RW @ 30 MHz ≤ f < 1 GHz < -30 dBm / 1 MHz RW @ 1 GHz ≤ f < 12.75 GHz < -60 dBm / 3.84 MHz RW @ 869 MHz ≤ f ≤ 894 MHz < -60 dBm / 3.84 MHz RW @ 1930 MHz ≤ f ≤ 1900 MHz < -60 dBm / 3.84 MHz RW @ 2110 MHz ≤ f ≤ 2155 MHz < -67 dBm / 100 kHz RW @ 925 MHz ≤ f ≤ 935 MHz < -79 dBm / 100 kHz RW @ 935 MHz < f ≤ 960 GHz < -71 dBm / 100 kHz RW @ 1805 MHz ≤ f ≤ 1880 MHz < -41 dBm / 300 kHz RW @ 1884.5 MHz < f < 1919.6 MHz
Transmit Intermodulation	< -31 dBc @ 5 MHz & < -41 dBc @ 10 MHz when Interference CW Signal Level = -40 dBc
Error Vector Magnitude	< 17.5 %, when Pout ≥ -20 dBm
Peak Code Domain Error	< -15 dB at Pout ≥ -20 dBm

3) WCDMA receiver specification

Item	Specification
Receive Frequency	Band1 : 2110 ~ 2170 MHz Band8 : 925 - 960MHz
Reference Sensitivity Level	Band1 : BER < 0.001 when Îor = -106.7 dBm / 3.84 MHz Band8 : BER < 0.001 when Îor = -103.7 dBm / 3.84 MHz
Maximum Input Level	BER < 0.001 when Îor = -25 dBm / 3.84 MHz
Adjacent Channel Selectivity (ACS)	ACS > 33 dB where BER < 0.001 when Îor = -92.7 dBm / 3.84 MHz & Ioac = –52 dBm / 3.84 MHz @ ±5 MHz
Blocking Characteristic	BER < 0.001 when Îor = -103.7 dBm / 3.84 MHz & Iblocking = -56 dBm / 3.84 MHz @ Fuw(offset) = ±10 MHz or Iblocking = -44 dBm / 3.84 MHz @ Fuw(offset) = ±15 MHz
Spurious Response	BER < 0.001 when Îor = -103.7 dBm / 3.84 MHz & Iblocking = -44 dBm
Intermodulation	BER < 0.001 when Îor= -103.7 dBm / 3.84 MHz & Iouw1 = -46 dBm @ Fuw1(offset) = ±10 MHz & Iouw2 = -46 dBm / 3.84 MHz @ Fuw2(offset) = ±20 MHz
Spurious Emissions	< -57 dBm / 100 kHz BW @ 9 kHz ≤ f < 1 GHz < -47 dBm / 1 MHz BW @ 1 GHz ≤ f ≤ 12.75 GHz
Inner Loop Power Control In Uplink	Adjust output(TPC command) cmd 1dB 2dB 3dB +1 +0.5/1.5 +1/3 +1.5/4 0 -0.5/+0.5 -0.5/+0.5 -0.5/+0.5 -1 -0.5/-1.5 -1/-3 -1.5/-4 group(10equal command group) +1 +8/+12 +16/+24

4) HSDPA transmitter specification

<table>
<tr><th>Item</th><th>Specification</th></tr>
<tr><td>Transmit Frequency</td><td>Band1 : 2110 ~ 2170 MHz
Band8 : 925MHz ~ 960 MHz</td></tr>
<tr><td>Maximum Output Power</td><td>Sub-Test
1=1/15, 2=12/15 21~25dBm / 3.84 MHz
3=13/15 4=15/8 20~25dBm / 3.84 MHz
5=15/7 6=15/0 19~25dBm / 3.84 MHz</td></tr>
<tr><td>HS-DPCCH</td><td>
<table>
<tr><th>Sub-test in table C.10.1.4</th><th>Power step</th><th>Power step slot boundary</th><th>Power step size, P [dB]</th><th>Transmitter power step tolerance [dB]</th></tr>
<tr><td rowspan="4">5</td><td>1</td><td>Start of Ack/Nack</td><td>6</td><td>+/- 2.3</td></tr>
<tr><td>2</td><td>Start of CQI</td><td>1</td><td>+/- 0.6</td></tr>
<tr><td>3</td><td>Middle of CQI</td><td>0</td><td>+/- 0.6</td></tr>
<tr><td>4</td><td>End of CQI</td><td>5</td><td>+/- 2.3</td></tr>
</table>
</td></tr>
<tr><td>Spectrum Emission Mask</td><td>Sub-Test : 1=1/15, 2=12/15, 3=13/15, 4=15/8, 5=15/7, 6=15/0
<table>
<tr><th>Frequency offset from carrier △f</th><th>Minimum requirement</th><th>Measurement Bandwidth</th></tr>
<tr><td>2.5 ~ 3.5 MHz</td><td>-35-15×(△f-2.5)dBc</td><td>30 kHz</td></tr>
<tr><td>3.5 ~ 7.5 MHz</td><td>-35-1×(△f-3.5)dBc</td><td>1 MHz</td></tr>
<tr><td>7.5 ~ 8.5 MHz</td><td>-35-10×(△f-7.5)dBc</td><td>1 MHz</td></tr>
<tr><td>8.5 ~ 12.5 MHz</td><td>-49dBc</td><td>1 MHz</td></tr>
</table>
</td></tr>
<tr><td>Adjacent Channel Leakage Power Ratio (ACLR)</td><td>Sub-Test : 1=1/15, 2=12/15, 3=13/15, 4=15/8, 5=15/7, 6=15/0
> 33 dB @ ±5 MHz
> 43 dB @ ±10 MHz</td></tr>
<tr><td>Error Vector Magnitude</td><td>< 17.5 %, when Pout ≥ -20 dBm</td></tr>
</table>

5) HSDPA receiver specification

Item	Specification
Receive Frequency	Band1 : 2110 ~ 2170 MHz Band8 : 925 ~ 960Hz
Maximum Input Level (BLER or R), 16QAM Only	Sub-Test : 1=1/15, 2=12/15, 3=13/15, 4=15/8, 5=15/7, 6=15/0 BLER < 10% or R >= 700kbps

6) WLAN 802.11b transceiver specification

Item	Specification
Transmit Frequency	2400 MHz ~ 2483.5 MHz (CH1~CH13)
Tx Power Level	≤ 20dBm under
Frequency Tolerance	within ±25 PPM
Chip clock Frequency Tolerance	within ±25 PPM
Spectrum Mask	≤ -30 @ fc-22MHz< f <fc-11MHz and fc+11MHz< f <fc+22MHz ≤ -50 @ f < fc-22MHz and f > fc+22MHz
Power ramp on/off time	≤ 2us
Carrier Suppression	≤ -15dB
Modulation Accuracy (Peak EVM)	≤ 35%
Spurious Emissions	< -36 dBm @ 30MHz ~ 1GHz < -30 dBm above @ 1GHz ~ 12.75GHz < -47 dBm @ 1.8GHz ~ 1.9GHz < -47 dBm @ 5.15GHz ~ 5.3GHz
Rx Min input Sensitivity	≤ -85dBm(1Mbps,2Mbps,5.5Mbps,11Mbps) @ FER ≤ 8%
Rx Max input Sensitivity	≥ -10dBm(1Mbps,2Mbps,5.5Mbps,11Mbps) @ FER ≤ 8%
Rx Adjacent Channel Rejection	≥ 35dB @FER ≤ 8%, interference input signal -70dBm@fc±25MHz(11Mbps)

7) WLAN 802.11g transceiver specification

Item	Specification
Transmit Frequency	2400 MHz ~ 2483.5 MHz (CH1~CH13)
Tx Power Level	≤ 20dBm
Frequency Tolerance	within ±25 PPM
Chip clock Frequency Tolerance	within ±25 PPM
Spectrum Mask	≤ -20 @ ±11MHz offset (9Mhz ~ 11MHz) ≤ -28 @ ±20MHz offset (11MHz ~ 20Mhz) ≤ -40 @ ±30MHz offset (20MHz ~ 30Mhz)
Transmitter constellation error (rms EVM)	≤ -5dB
Spurious Emissions	< -36 dBm @ 30MHz ~ 1GHz < -30 dBm above @ 1GHz ~ 12.75GHz < -47 dBm @ 1.8GHz ~ 1.9GHz < -47 dBm @ 5.15GHz ~ 5.3GHz
Rx Min input Sensitivity	PER ≤ 10% -82dBm@6Mbps, -81dBm@9Mbps, -79dBm@12Mbps -77dBm@18Mbps, -74dBm@24Mbps, -70dBm@36Mbps -66dBm@48Mbps, -65dBm@54Mbps
Rx Max input Sensitivity	≥ -20dBm(6,9,12,18,24,36,48,54Mbps) @ PER ≤ 10%
Rx Adjacent Channel Rejection	PER ≤ 10%, ACR ≥ 16dB@6Mbps, ACR ≥ 15dB@9Mbps, ACR ≥ 13dB@12Mbps, ACR ≥ 11dB@18Mbps, ACR ≥ 8dB@24Mbps, ACR ≥ 4dB@36Mbps ACR ≥ 0dB@48Mbps, ACR ≥ -1dB@54Mbps ※ ACR shall be measured by setting the desired signal's strength 3 dB above the rate-dependent sensitivity specified in min input sensitivity

8) WLAN 802.11n transceiver specification

Item	Specification
Transmit Frequency	2400 MHz ~ 2483.5 MHz (CH1~CH13)
Tx Power Level	≤ 20dBm
Frequency Tolerance	within ±25 PPM
Chip clock Frequency Tolerance	within ±25 PPM
Spectrum Mask	≤ -20 @ ±11MHz offset (9Mhz ~ 11MHz) ≤ -28 @ ±20MHz offset (11MHz ~ 20Mhz) ≤ -45 @ ±30MHz offset (20MHz ~ 30Mhz)
Transmitter constellation error (rms EVM)	≤ -5dB
Spurious Emissions	< -36 dBm @ 30MHz ~ 1GHz < -30 dBm above @ 1GHz ~ 12.75GHz < -47 dBm @ 1.8GHz ~ 1.9GHz < -47 dBm @ 5.15GHz ~ 5.3GHz
Rx Min input Sensitivity	PER ≤ 10% 82dBm@6.5Mbps, -79dBm@13Mbps, -77dBm@19.5Mbps -74dBm@26Mbps, -70dBm@39Mbps, -66dBm@52Mbps -65dBm@58.5Mbps, -64dBm@65Mbps
Rx Max input Sensitivity	≥ -20dBm(6,9,12,18,24,36,48,54Mbps) @ PER ≤ 10%
Rx Adjacent Channel Rejection	PER ≤ 10%, ACR ≥ 16dB@6.5Mbps, ACR ≥ 13dB@13Mbps, ACR ≥ 11dB@19.5Mbps, ACR ≥ 8dB@26Mbps, ACR ≥ 4dB@39Mbps, ACR ≥ 0dB@52Mbps ACR ≥ -1dB@58.5Mbps, ACR ≥ -2dB@65Mbps ※ ACR shall be measured by setting the desired signal's strength 3 dB above the rate-dependent sensitivity specified in min input sensitivity

9) GPS receiver specification

Item	Specification
Receive Frequency	1574.42 MHz ~ 1576.42 MHz
Minimum Sensitivity	1 satellite ≥-142dBm, 7 satellites ≥ -147dBm at coarse time aiding

3. CIC AND SERVICE CENTER

3.1 CIC FAQ

No	FAQ	Q&A
1	Q	I can't remember the PhoneLock password.
	A	1. How to disable Pattern Lock, password, and pin -> Combine HW Factory Reset key 2. Confirm if it can be written on User manual -> to be included on E1 manual 3. Instruction of how to set combination of HW Factory Reset key -> When phone is powered off, press power key and the bottom volume key on E1 -> factory reset starts
1. How to disable Pattern Lock, Password and PIN. 2. Requesting confirmation if it can be noted on User manual. 3. Explanation of HW Factory Reset key combination&methods.		
2	Q	What should I do to add or remove files to and from the SD card?
	A	Plug in a USB cable to transfer your file into SDCard. Install proper USB drivers on your PC in advance. 1. Attach your phone to the PC with a USB cable. A popup message will be displayed. Select USB Storage on the popup window. Then, your phone recognizes the connection and the computer displays a new mobile disk window through which you can open the folder you want. Choose file to be transferred from PC and copy to the mobile disk window. 2. If you want to transfer file to PC, follow the same procedure as described above. Choose file from mobile disk window and copy to PC.
1.PC<-> SD CARD 2.PHONE<-> SD CARD		

No	FAQ	Q&A
3	Q	3G connection does not work properly abroad.
	A	For Dual SIM of E1, WCDMA is applicable to only one side of SIM. You can check available 3G network as follows. menu -> settings -> wireless & network settings -> mobile networks -> network operators -> search If you register a 3G in manually, convert the settings to 'select automatically'. Otherwise, connection to network might be failed especially, if you are in another region.
ex)1. Europe<->Europe 2. Europe<->Continents(North America, Asia etc)		
4	Q	What should I do to deal with the wrong GPS location?
	A	Your current location may not be recognized in building. Search again current location after subsequent switching GPS off and on
5	Q	What should I do to deal with the incompatible apps downloaded?
	A	Check if your application is compatible with your phone. Remove the application and download again.
6	Q	What should I do to create an email account?
	A	You can make your email account by registering in webmail providers (e.g. http://www.gmail.com, http://www.yahoo.com, http://www.hotmail.com)

No	FAQ	Q&A
7	Q	Email registration does not work.
	A	First, check the availability of network, WiFi or 3G. Also, check if your email address or password is correctly entered. If you are using email address provided by Gmail, Yahoo, and Hotmail, your account is automatically created once you enter your email address and password. If your account is not automatically created, check how to register your account in your webmail provider and set your account on 'Manual setup'
8	Q	Apps not in use appear as programs in use even when I kill them.
	A	Application in Android reruns itself even if it is turned off. This can happen because Android sets cache before being used for fast performanceor or because background service is being provided.
9	Q	Wi-Fi connection does not work properly.
	A	Connect again after checking signal strength on Setting -> Wireless and Network ->Wi-Fi Network
10	Q	What should I do to install the PC Sync Program?
	A	You can download on http://www.lg.com -> Select Country -> Support -> Mobile Phone Support -> Select model device -> PC Suite program.
11	Q	What should I do to install the Phone Driver?
	A	You can download on http://www.lg.co.kr -> Download center -> Search model -> Download software. Or, it is automatically installed when PC Suite program is installed.

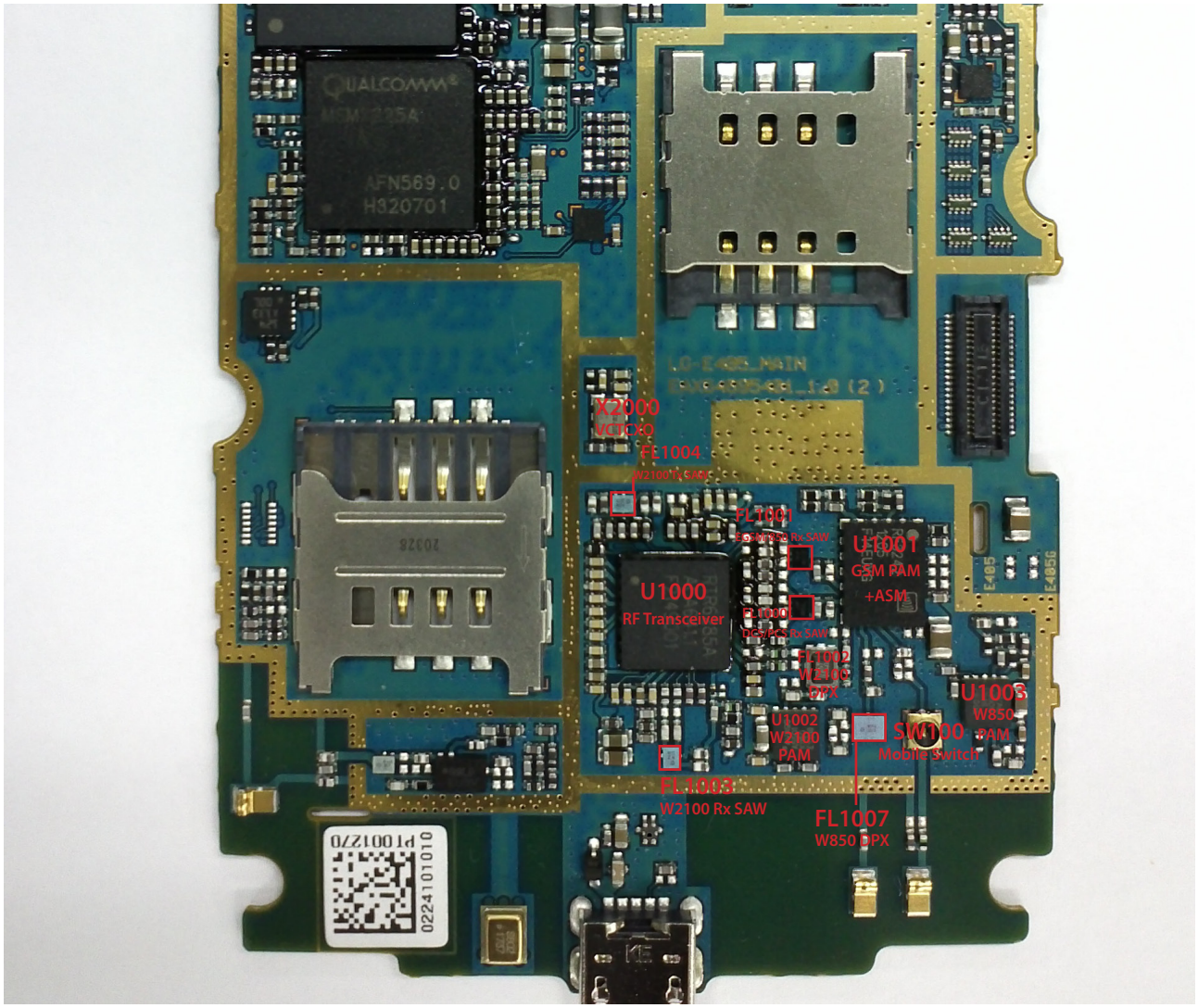
No	FAQ	Q&A
12	Q	How to connect internet/data network
	A	Use tethering via USB cable. If you follow settings -> connectivity -> Default connection mode -> USB tethering, local area connection is newly setup on PC. You can use the internet via web browser.
13	Q	What should I do to connect the PC Sync program with the phone?
	A	1. (For connection to USB) Attach your phone with a USB cable -> Select PC Software -> automatically connected when PC Suite is run. 2. (For connection to Wi-Fi) Device of PC Suite -> Device connection -> Wi-Fi connection and connect with device by following display.
14	Q	Can I change the language setting?
	A	You can change your language on Setting -> Language and Keyboard -> Select Language
15	Q	What should I do for Reset and Factory Reset?
	A	You can reset by touching 3845#*405# -> WCDMA Only -> Factory Reset
16	Q	What should I do to change the bell sound?
	A	You can change your ring tone on Setting -> Sound -> Ring tone

No	FAQ	Q&A
17	Q	Is it compatible with other devices?
	A	Bluetooth function is compatible.
ex) 1. Bluetooth 2. other		
18	Q	What should I do to use HDMI?
	A	NA
19	Q	What should I do to solve HDMI error?
	A	NA
20	Q	What should I do to use SmartShare?
	A	NA
21	Q	What should I do to deal with Smartshare error?
	A	NA
22	Q	My battery runs out so fast.
	A	You can turn off applications not in use to conserve battery power of Smart phone.

No	FAQ	Q&A
23	Q	What should I do to find out the schedule for new releases of OS or SW?
	A	You can download updated software on Settings> About phone > Software update
24	Q	What should I do to update SW?
	A	You can follow Setting -> Phone information -> Software update
25	Q	What about the warranty period and limit?
	A	The applicable warranty period is 2 years.
26	Q	What kinds of phone accessories are there?
	A	They are TA, Data cable, and Ear mic.
27	Q	We ask you for more than 3 Qs&As expected regarding new products, features and other specific things.
	A	Q1.For use of Dual Sim, is 3G SIM available to both SIM1 and SIM2? Yes, it is. Q2. For use of Dual Sim, can I take a new call from SIM2 during the call from SIM1? Yes, the call from SIM1 is hold and you can take new call from SIM2. Q3. For connection to N/W, can I set a connection through only one certain SIM ? Yes, On Setting menu, you can set default data network.

4. TROUBLE SHOOTING

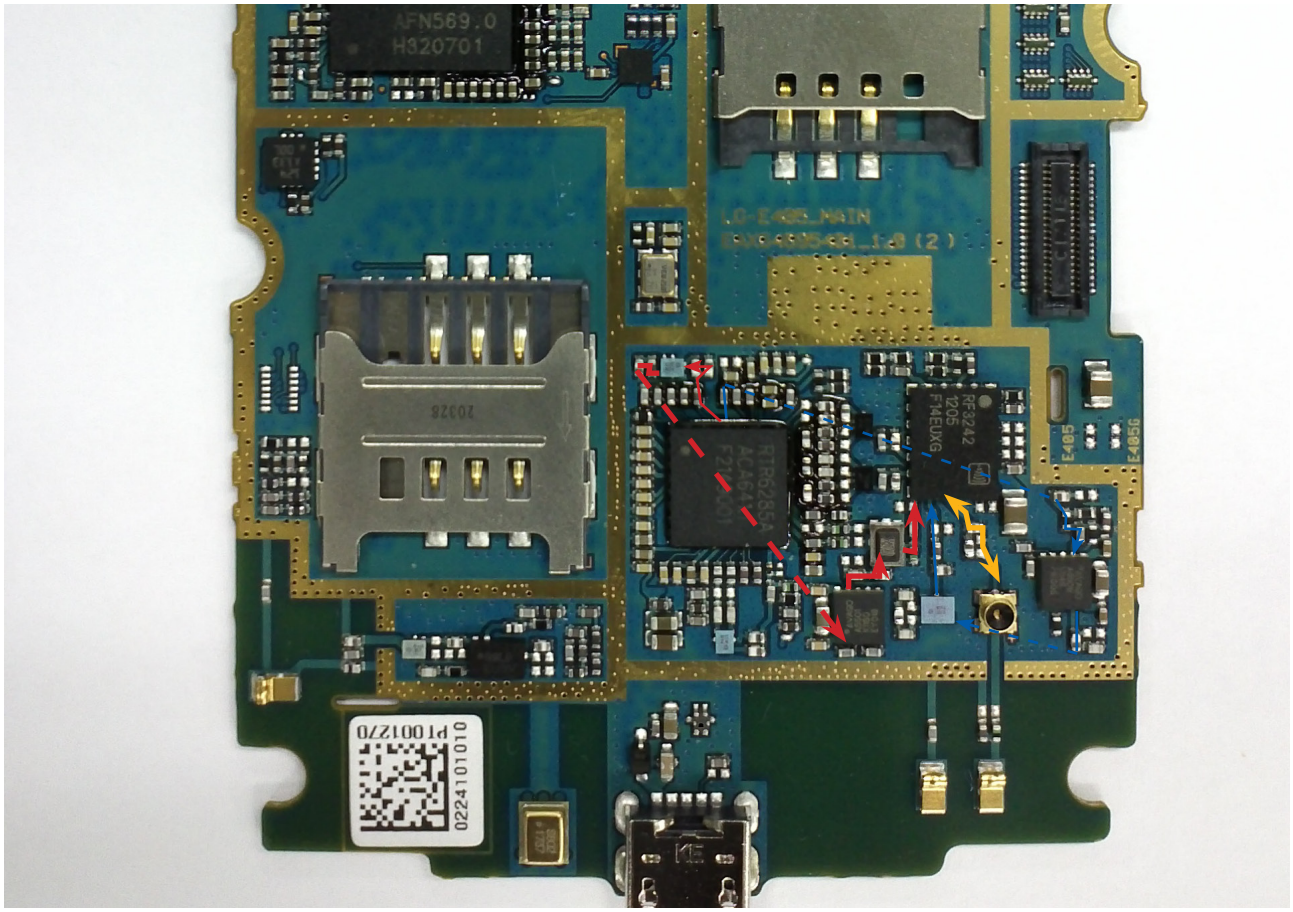
4.1 RF Component



RF component (WCDMA / GSM)

Reference	Description	Reference	Description
U1000	RTR6285A(Transceiver)	FL1007	WCDMA (VIII) Duplexer
U1001	GSM TX Module (ASM+GSM PAM)	FL1003	WCDMA (I) RX SAW Filter
U1002	WCDMA (I) PAM	FL1001	EGSM/850 Rx saw filter
U1003	WCDMA (VIII) PAM	FL1000	DCS/PCS Rx saw filter
FL1004	WCDMA (I) TX SAW Filter	X2000	VCTCXO(19.2MHz)
FL1002	WCDMA (I) Duplexer	SW1000	RF Antenna Connector

4.2 SIGNAL PATH

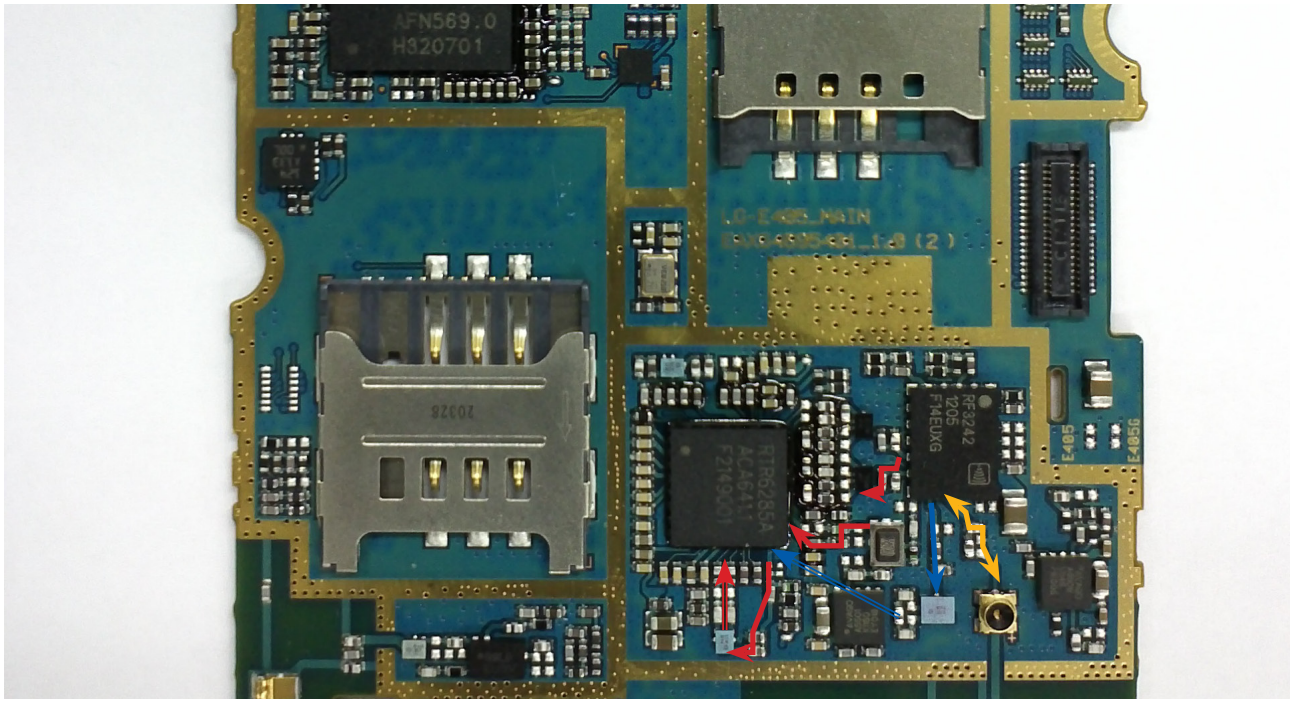


WCDMA I and VIII Band TX Signal PATH

D2. WCDMA 2100 TX PATH

E2. WCDMA 900 TX PATH

F1. COMMON TX/RX PATH

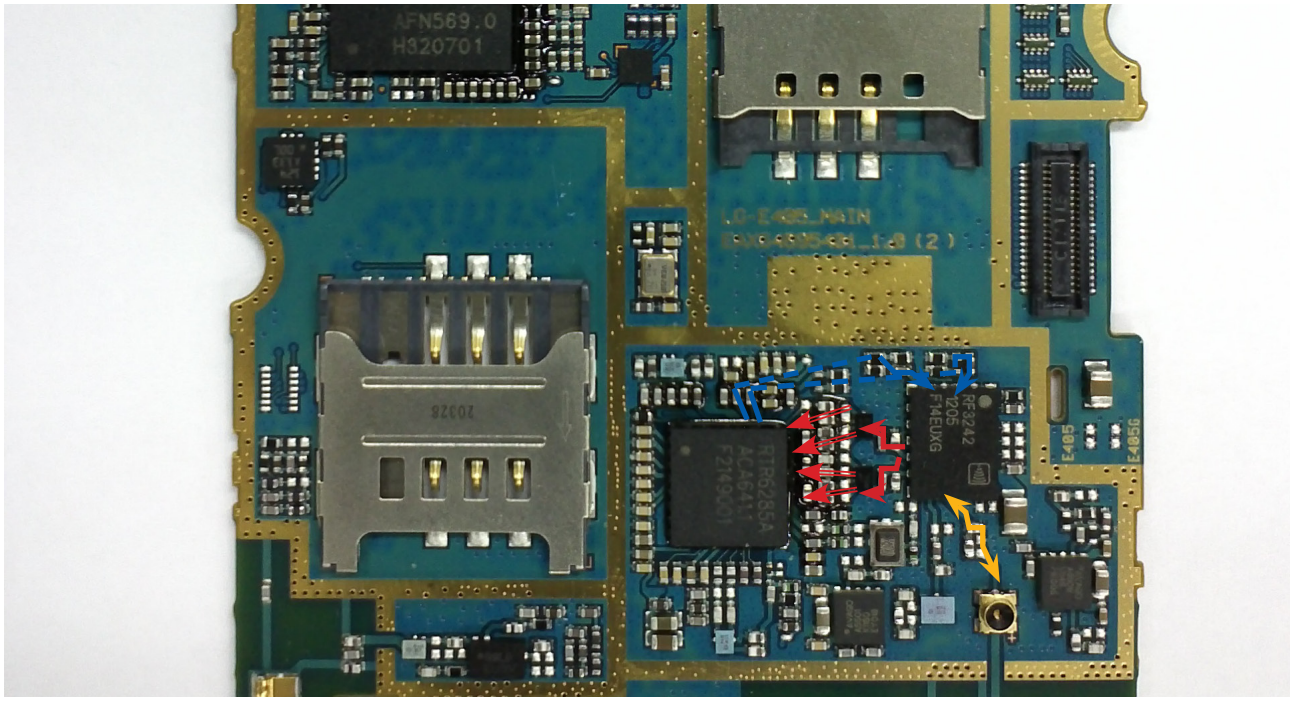


WCDMA I and VIII Band RX Signal PATH

D2. WCDMA 2100 TX PATH

E2. WCDMA 900 TX PATH

F1. COMMON TX/RX PATH



GSM850/GSM900/DCS/PCS's RX/TX Signal PATH

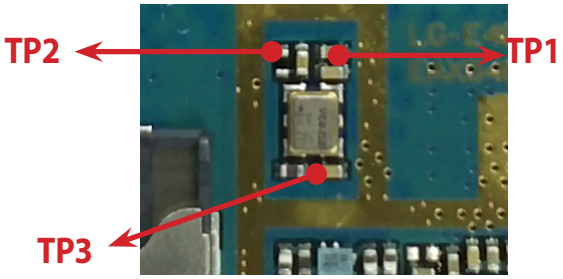
A. GSM850/GSM900/DCS1800/PCS1900 RX PATH

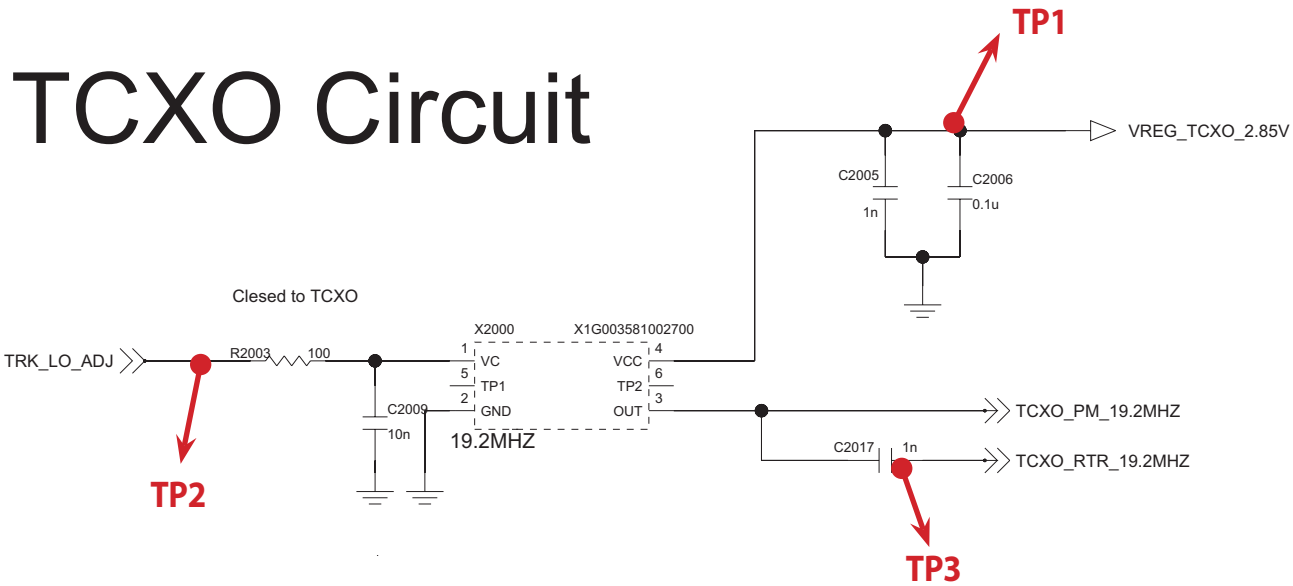
B. GSM850/GSM900/DCS1800/PCS1900 TX PATH

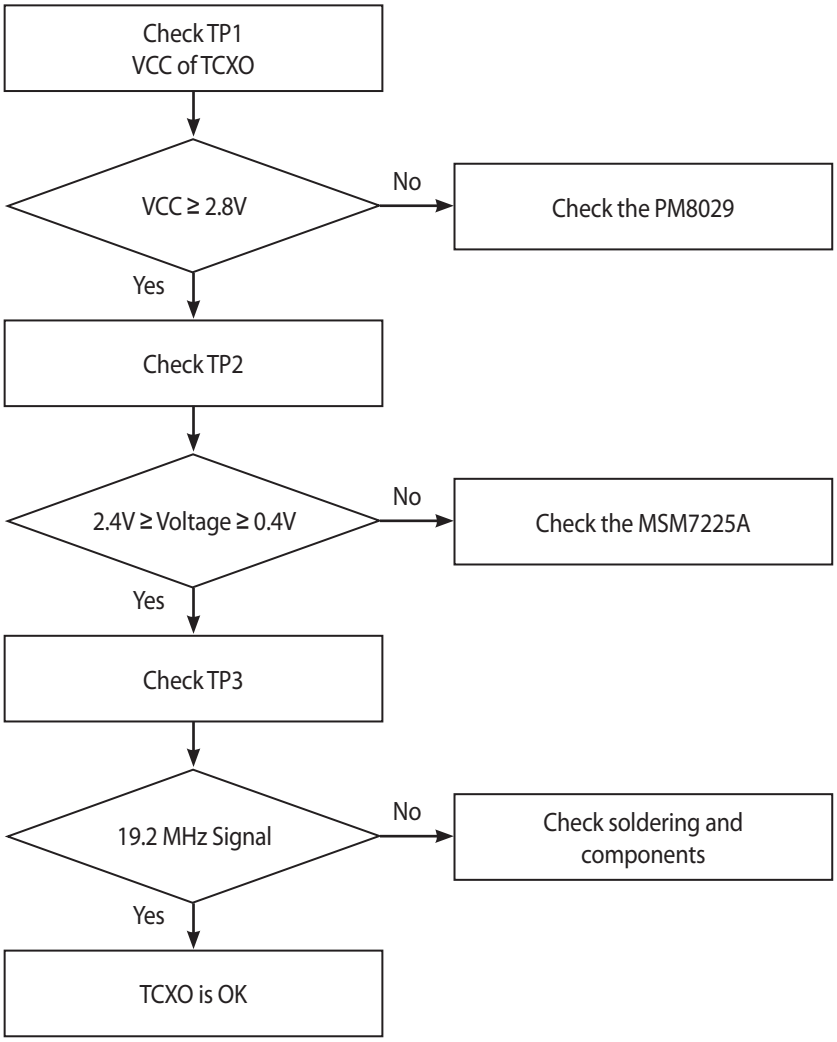
C1. COMMON TX/RX PATH

4.3 Checking TCXO Block

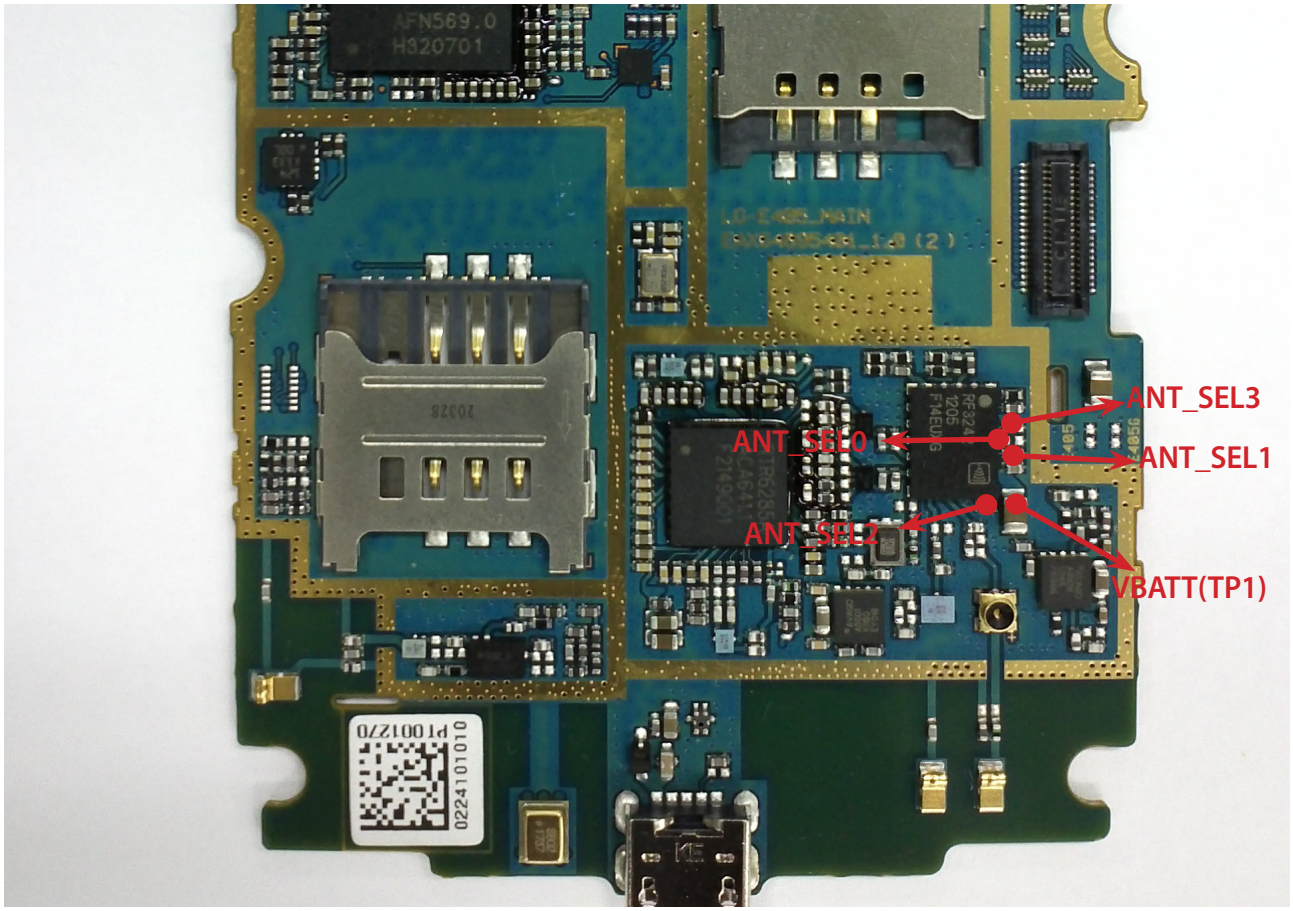
The output frequency (19.2MHz) of TCXO (X2000) is used as the reference one of RTR6285 and PM8029 internal VCO.

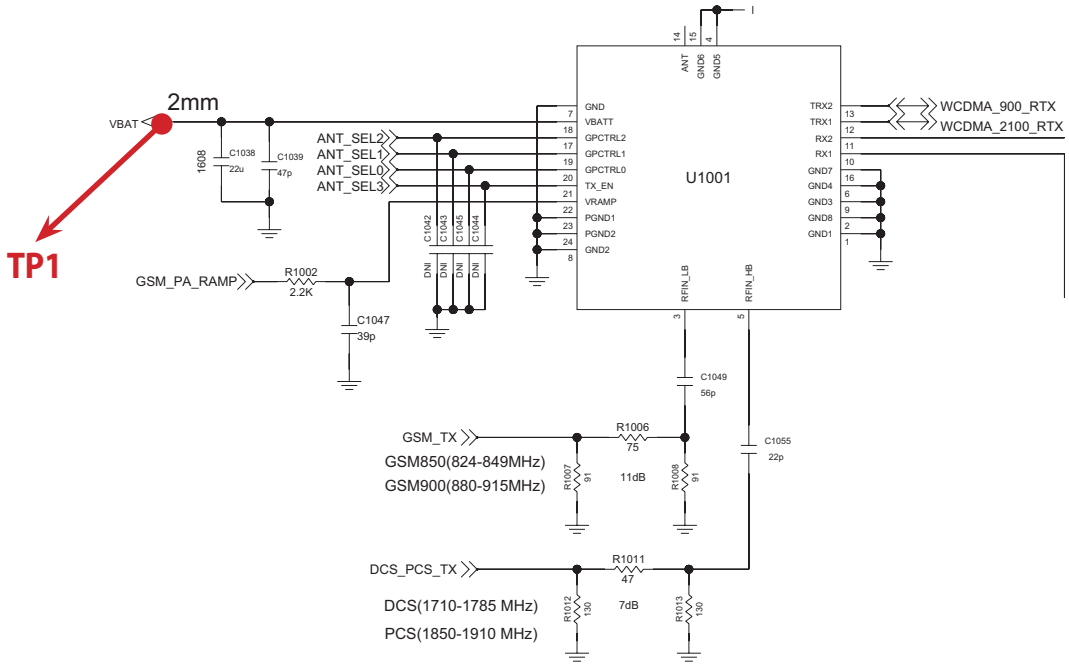






4.4 Checking GSM TX Module(GSM PAM + ASM) Block



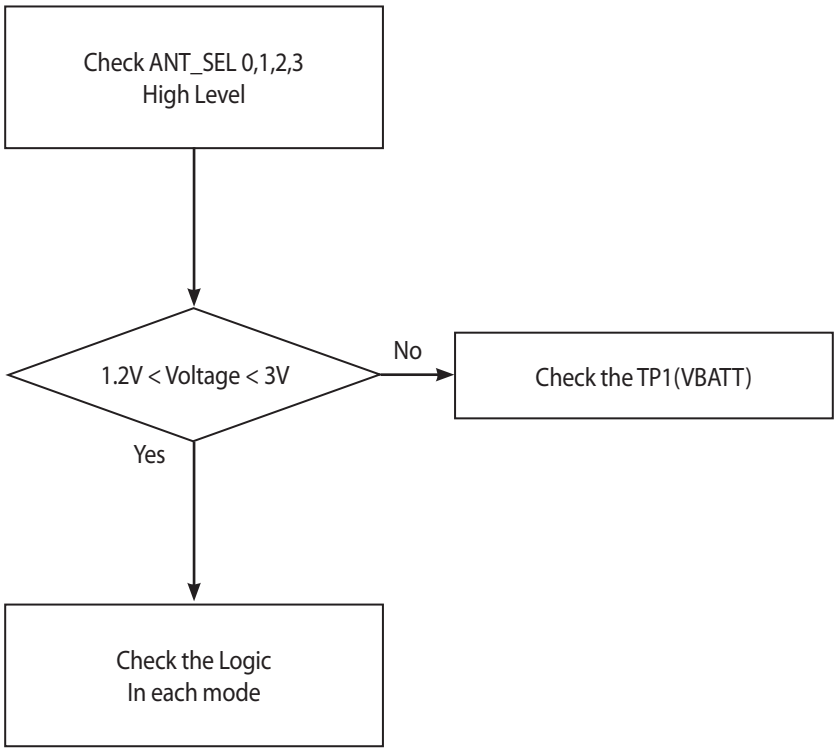


Schematic of the Antenna Switch Block

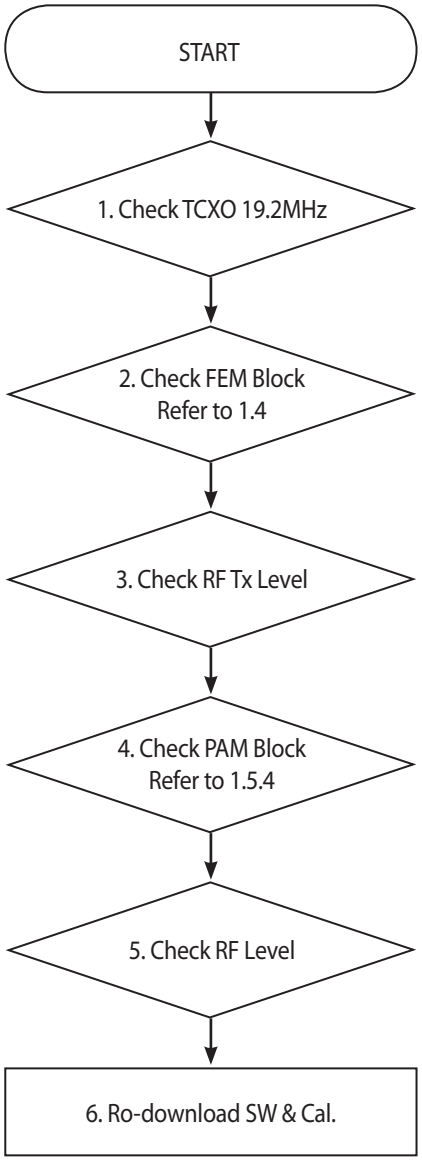
Module Control and Antenna Switch Logic

ANT_SEL 3	ANT_SEL 2	ANT_SEL 1	ANT_SEL 0	Tx Module Mode
0	0	0	0	Standby
0	1	0	0	Rx1
0	0	1	0	Rx2
0	0	1	1	TRX1
0	0	0	1	TRX2
1	0	1	0	Low Band GMSK
1	0	1	1	High Band GMSK

Checking Switch Block Power Source



4.5 Checking WCDMA Block



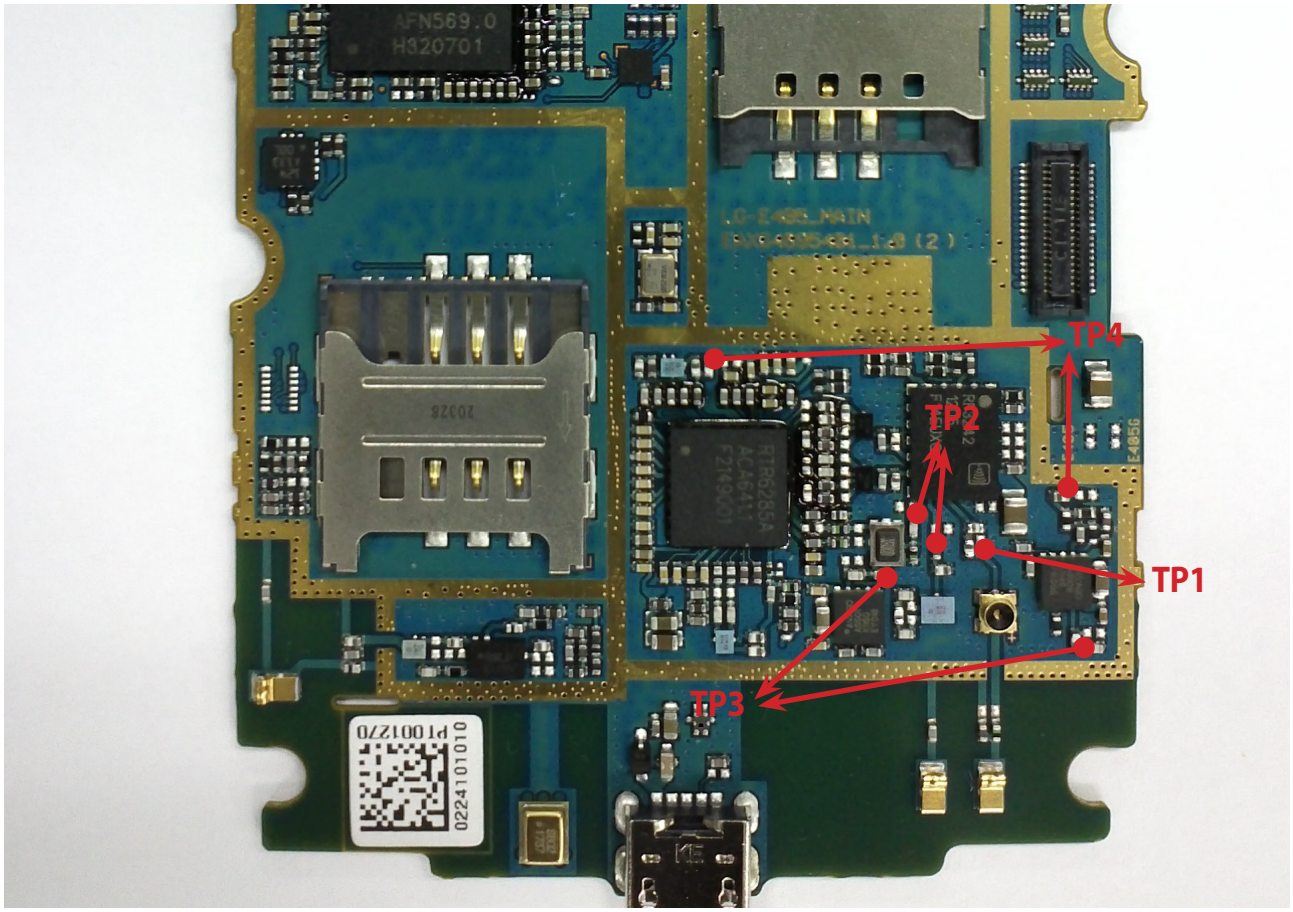
4.5.1Checking TCXO Block

Refer to 4.3

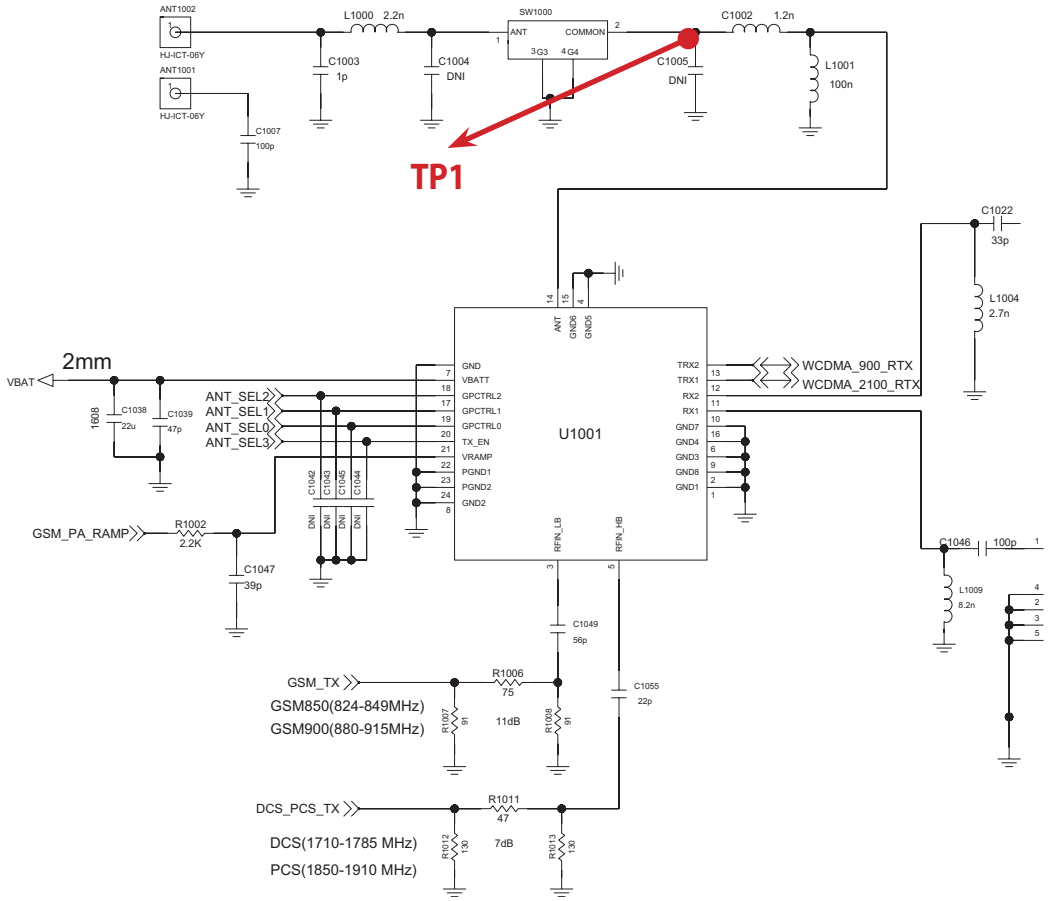
4.5.2. Checking Tx Module Block

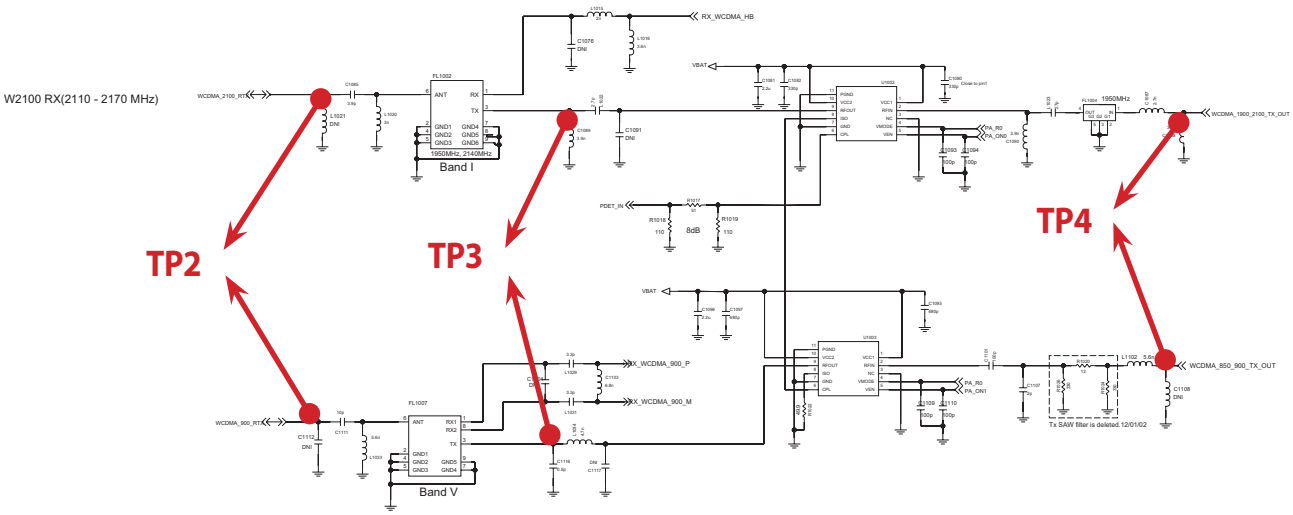
Refer to 4.4

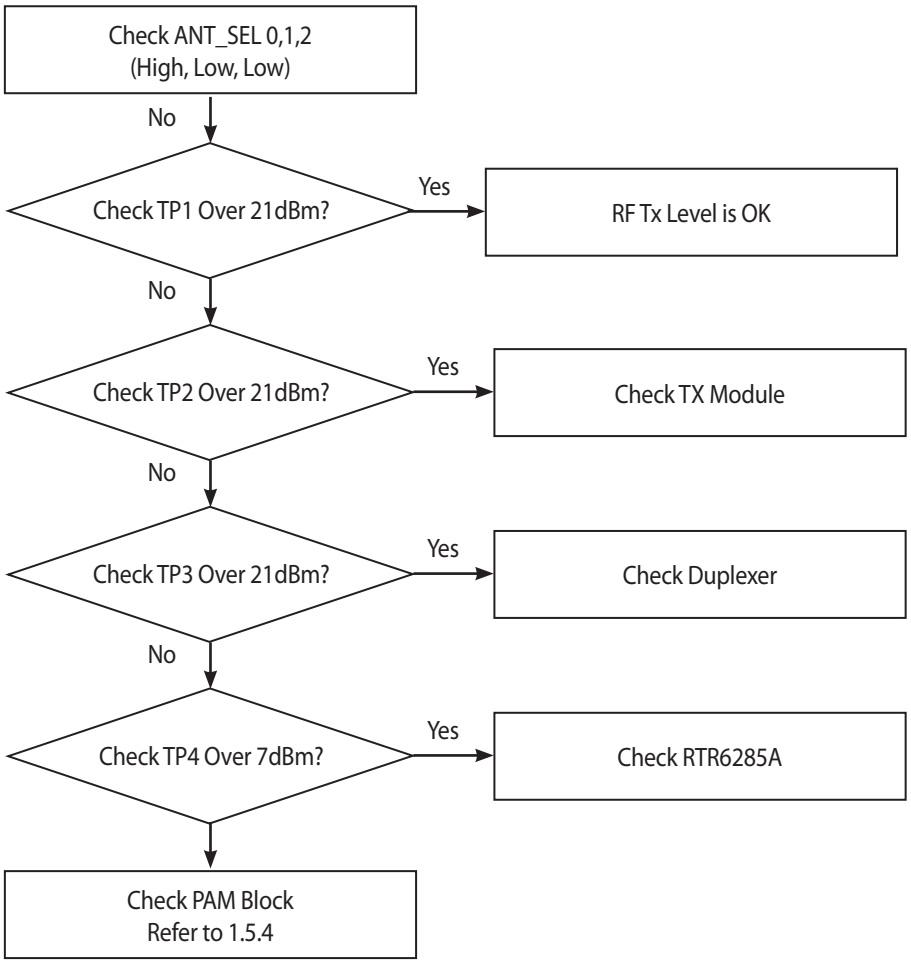
4.5.3. Checking RF TX Level



Test Point (TX Level)







RTR6285 Maximum output Power = 7 dBm
RTR6285 minimum output Power = -80 dBm

4.5.4. Checking PAM Block

PAM Control Signal

PA_ON0 (C1094), PA_ON1(C1110) : PAM Enable

PA_R0: PAM Gain Control

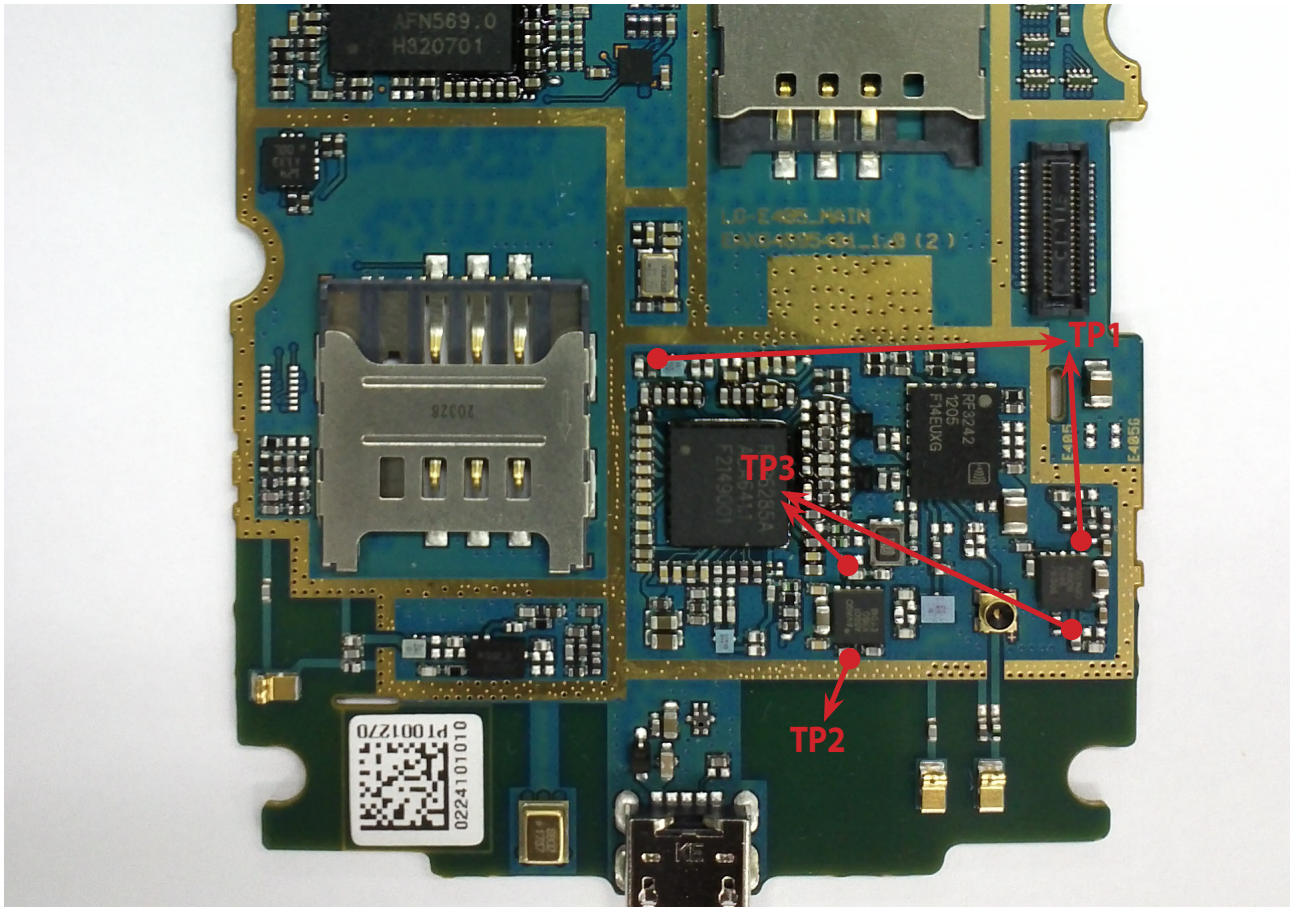
PA_ON must be HIGH (over 2.6V)

PAM IN/OUT Signal :

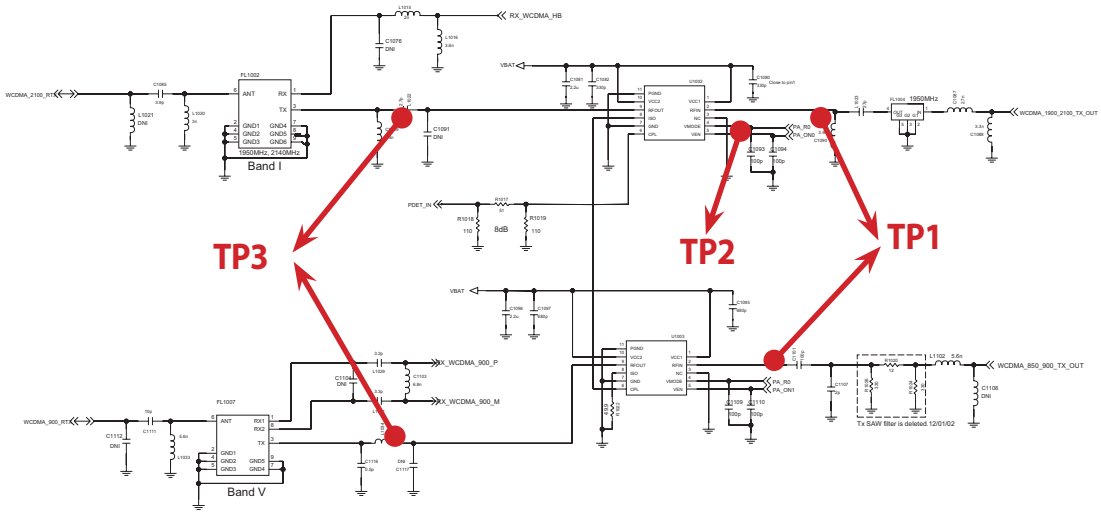
When PAM is under the operation of high power mode (PA_R0(C1093) : Low),

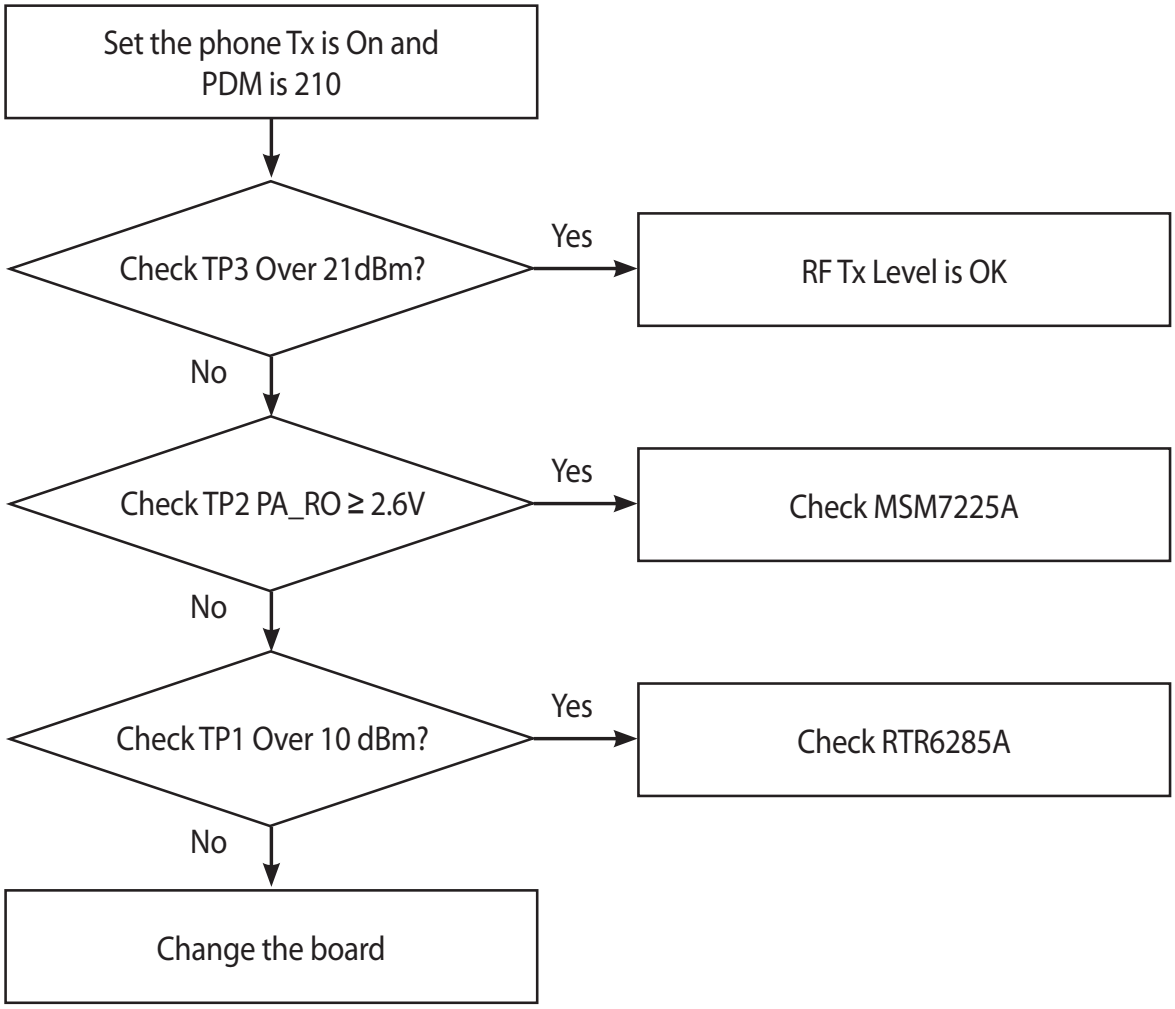
PAM OUT power must be over 21 dBm

PAM IN power must be under 10 dBm



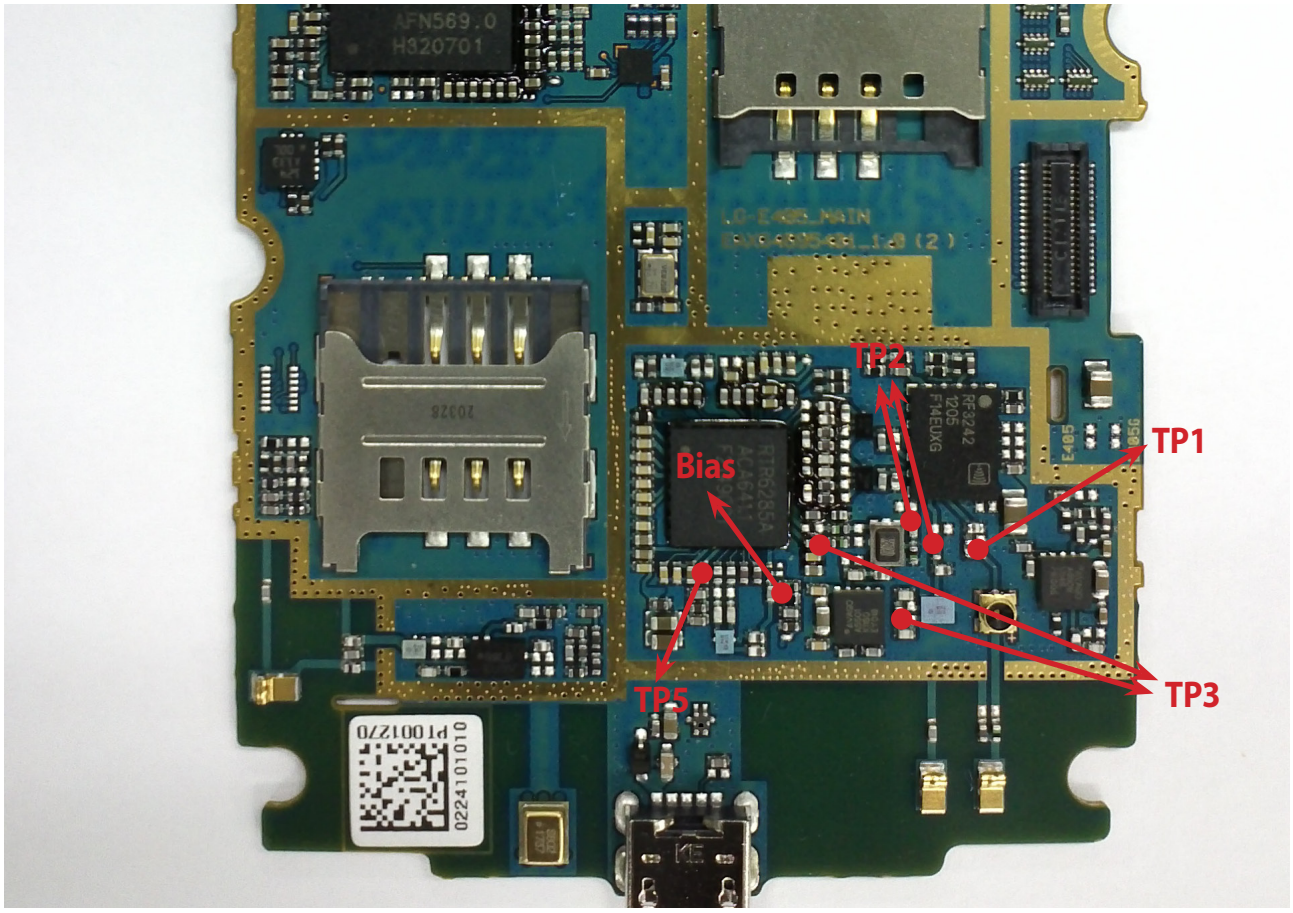
W2100 RX(2110 - 2170 MHz)

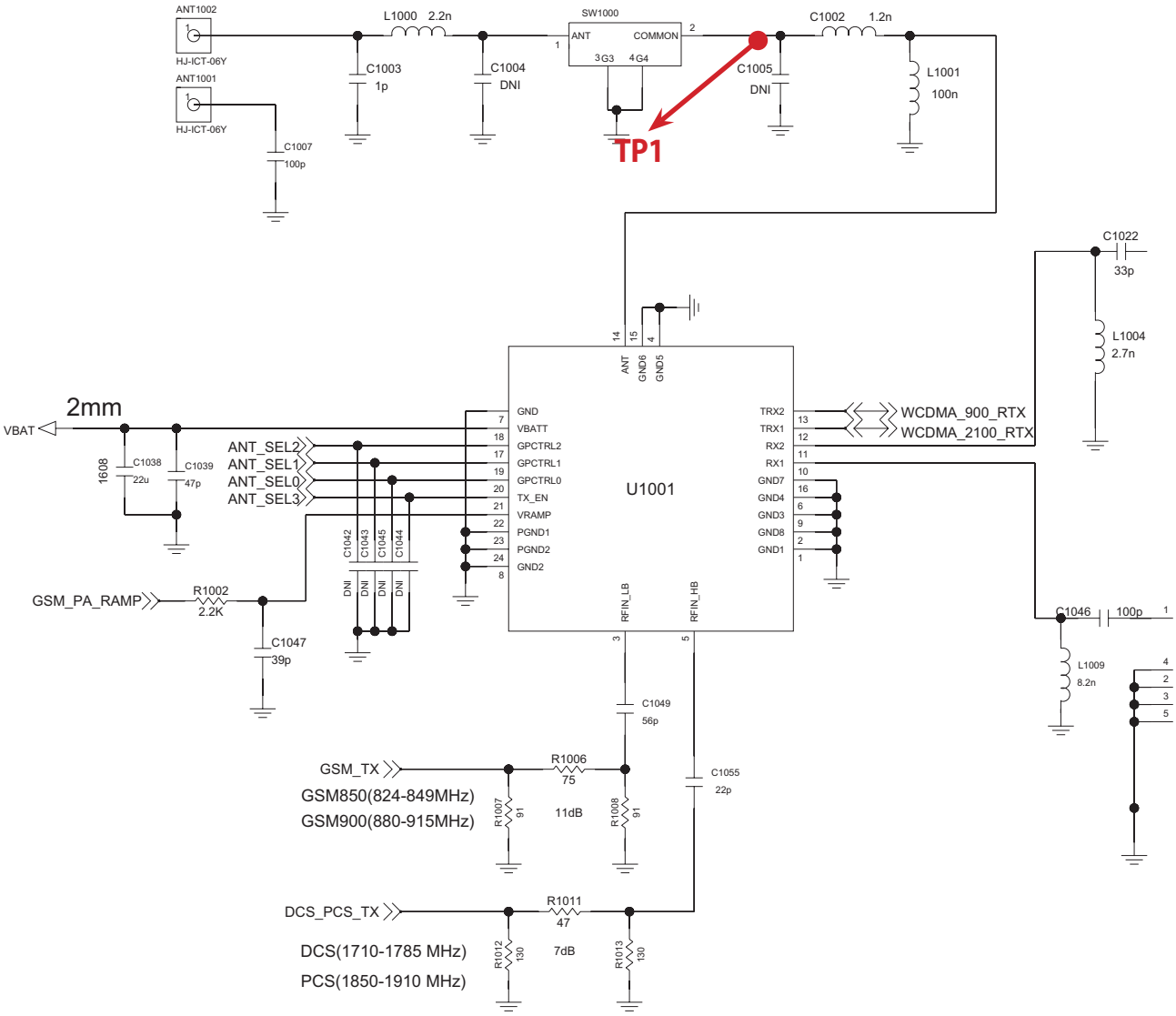


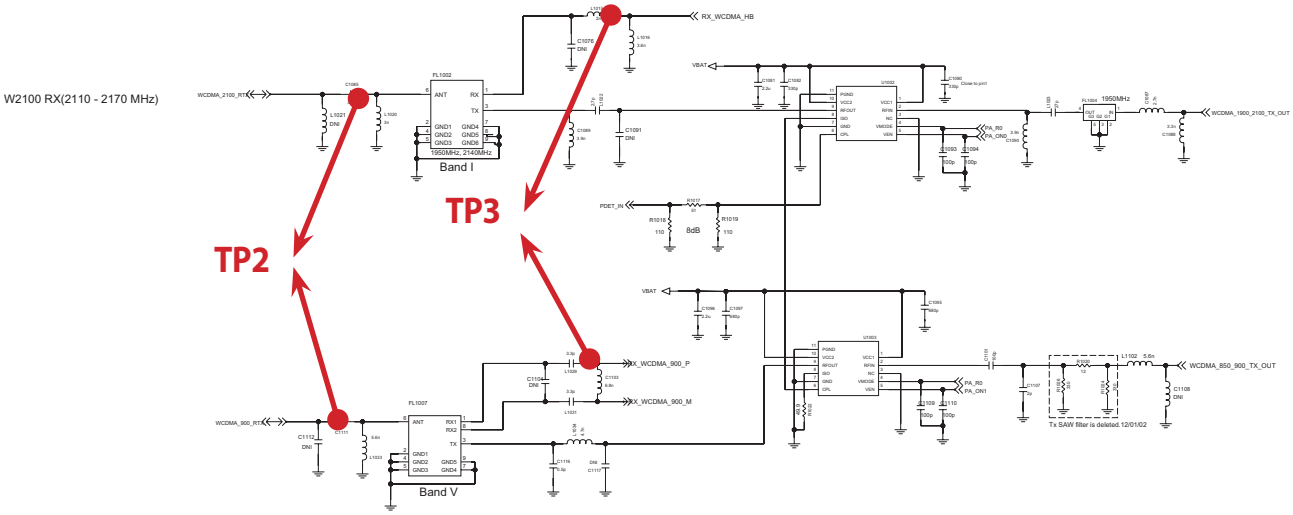


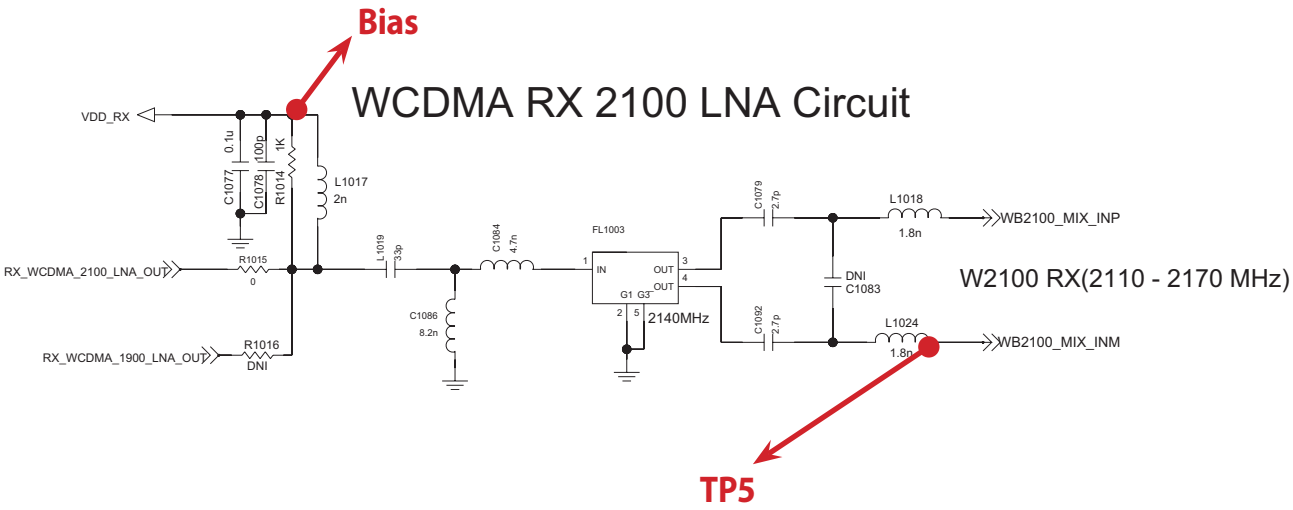
4.5.5. Checking RF Rx Level

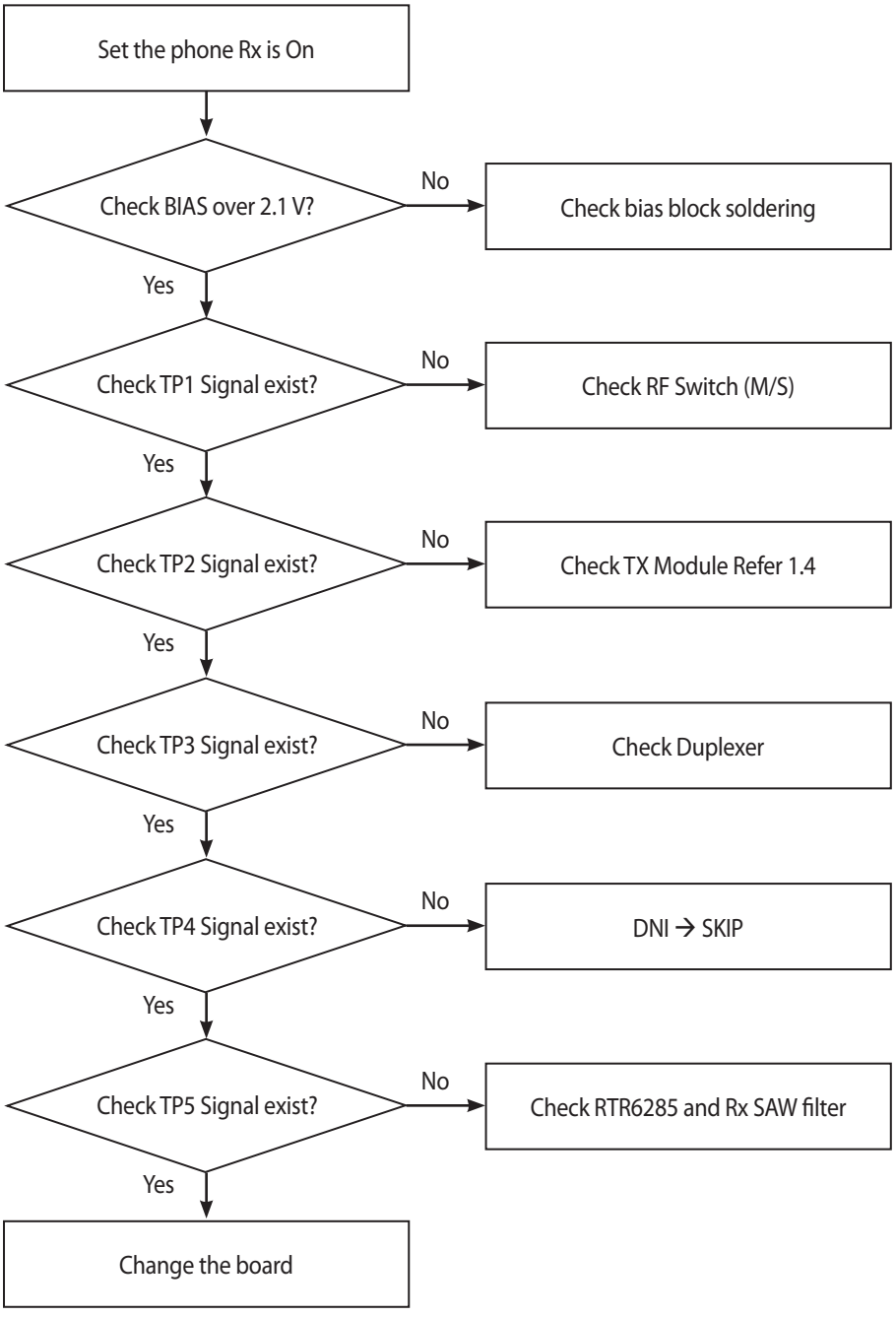
Test Point (RF Rx Level)



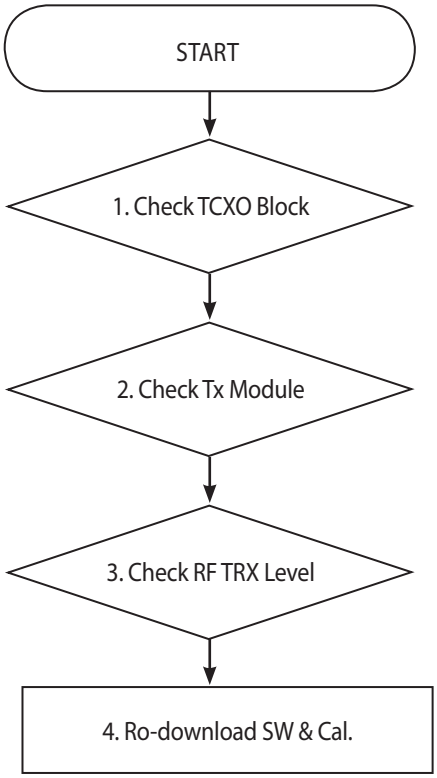


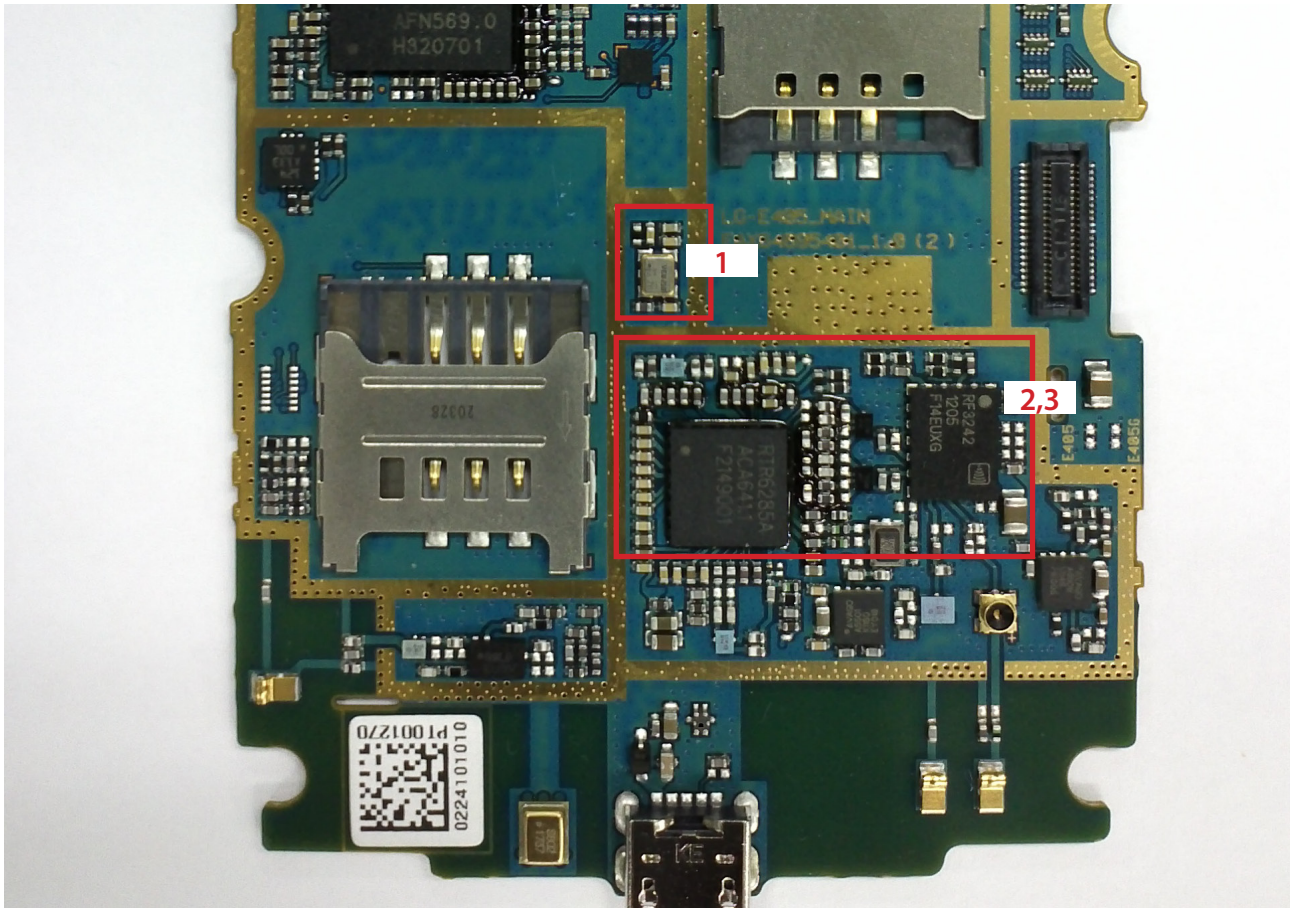






4.6 Checking GSM Block





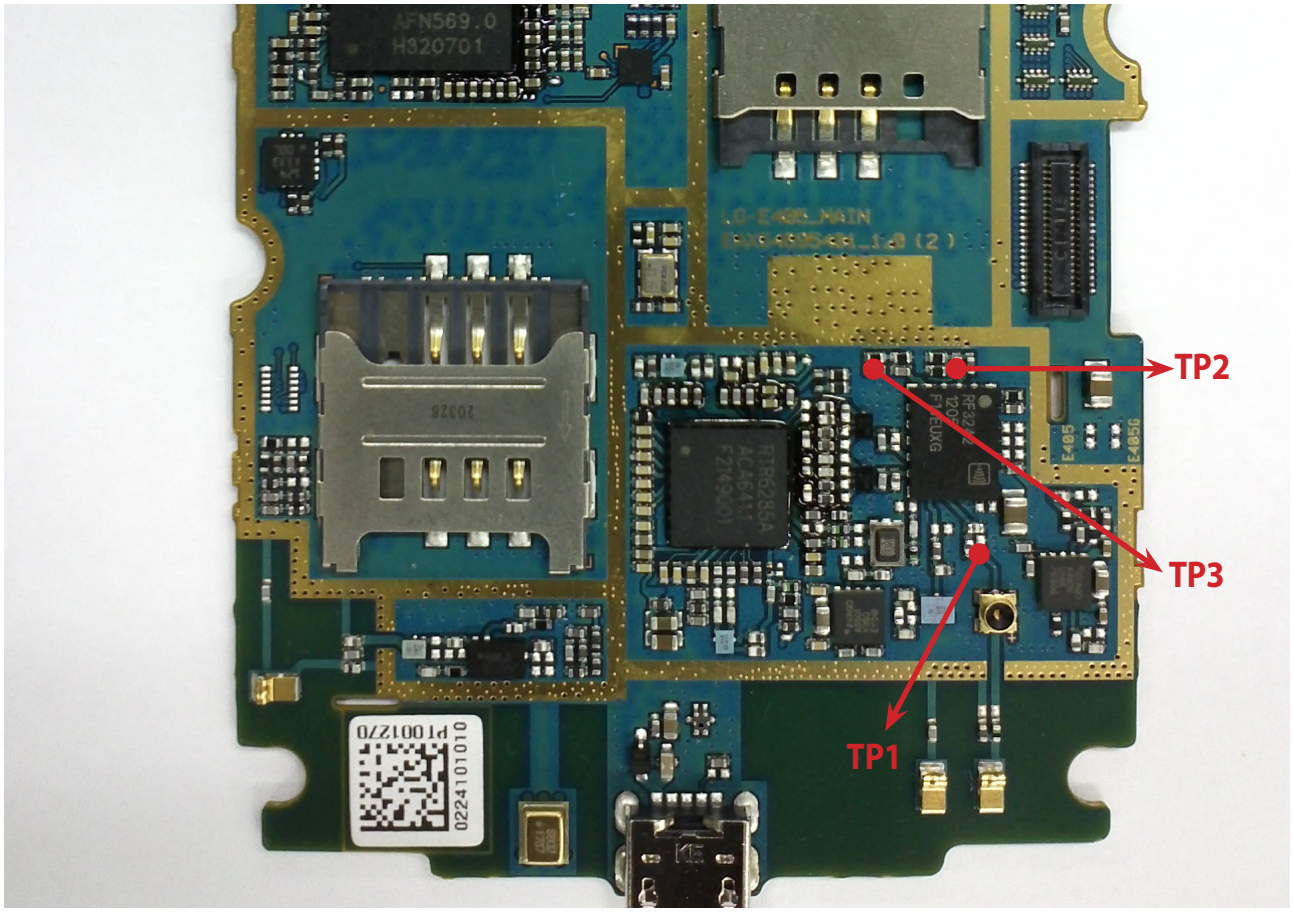
4.6.1 Checking TCXO Block

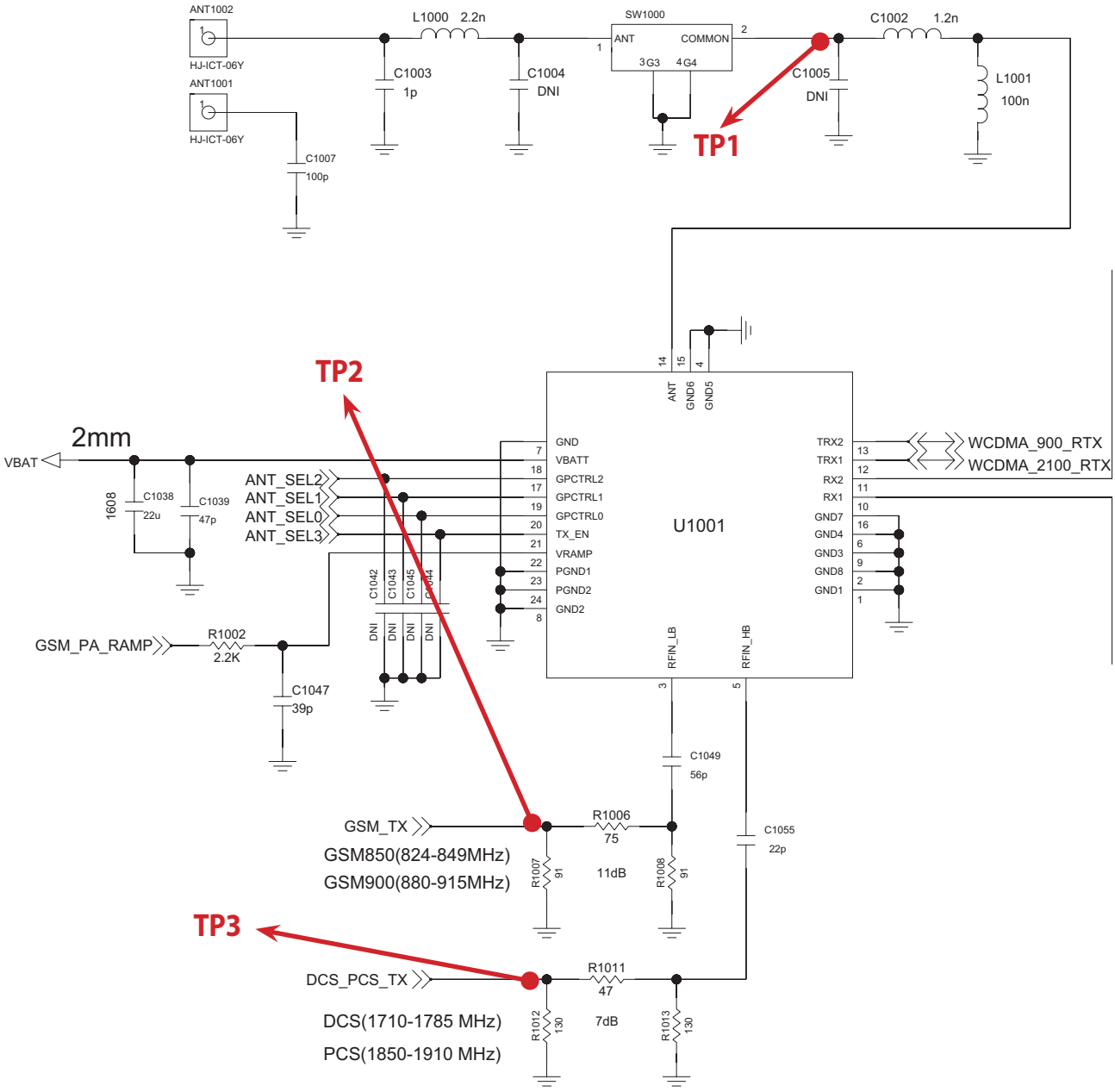
Refer to 4.3

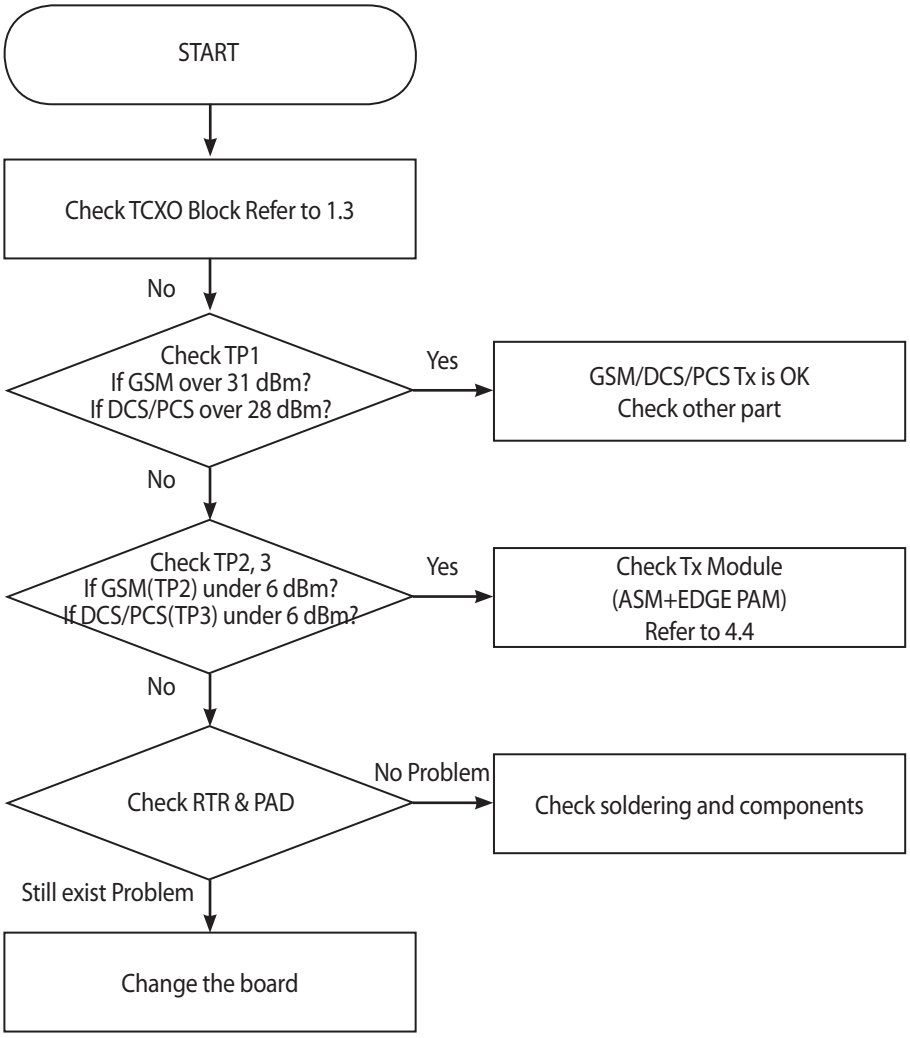
4.6.2 Checking Tx module Block

Refer to 4.4

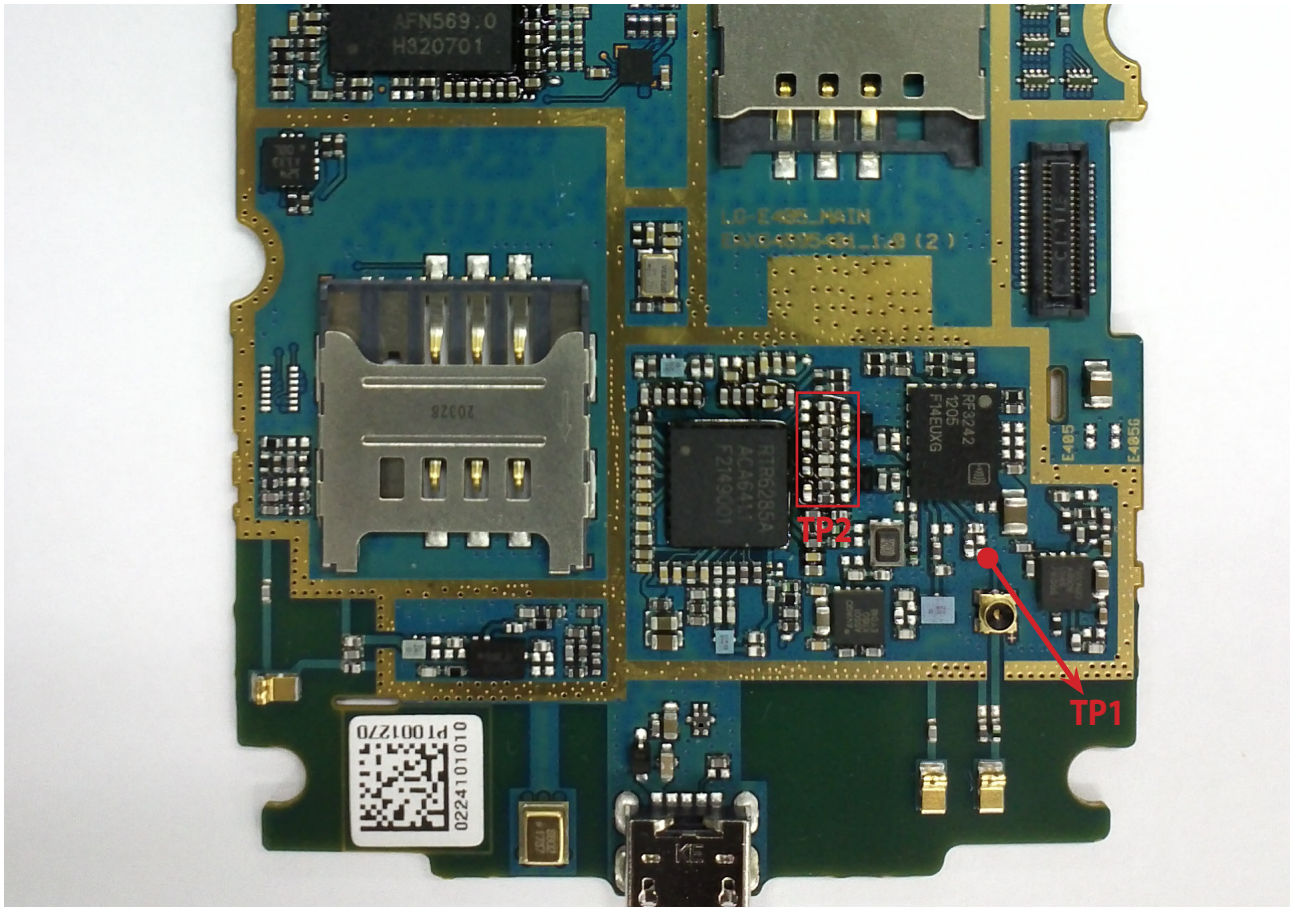
4.6.3 Checking RF TX level

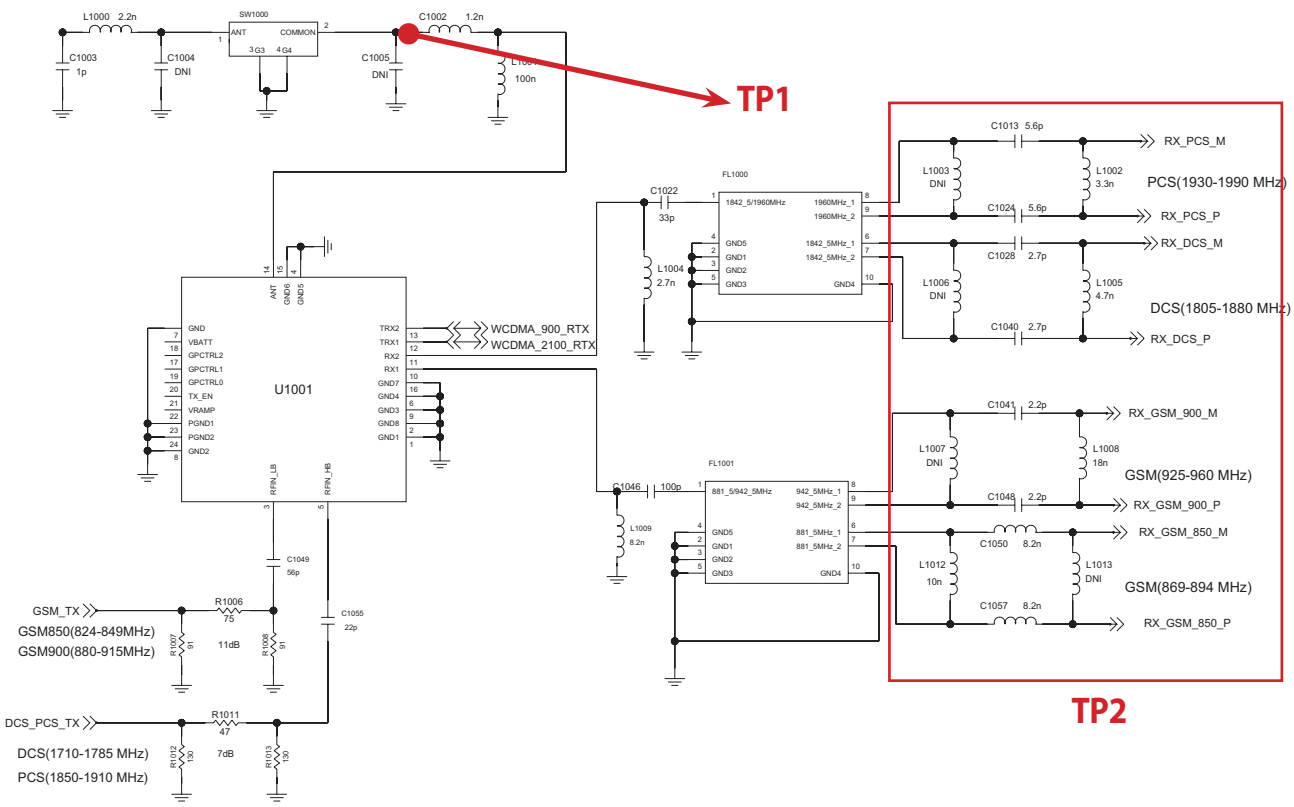


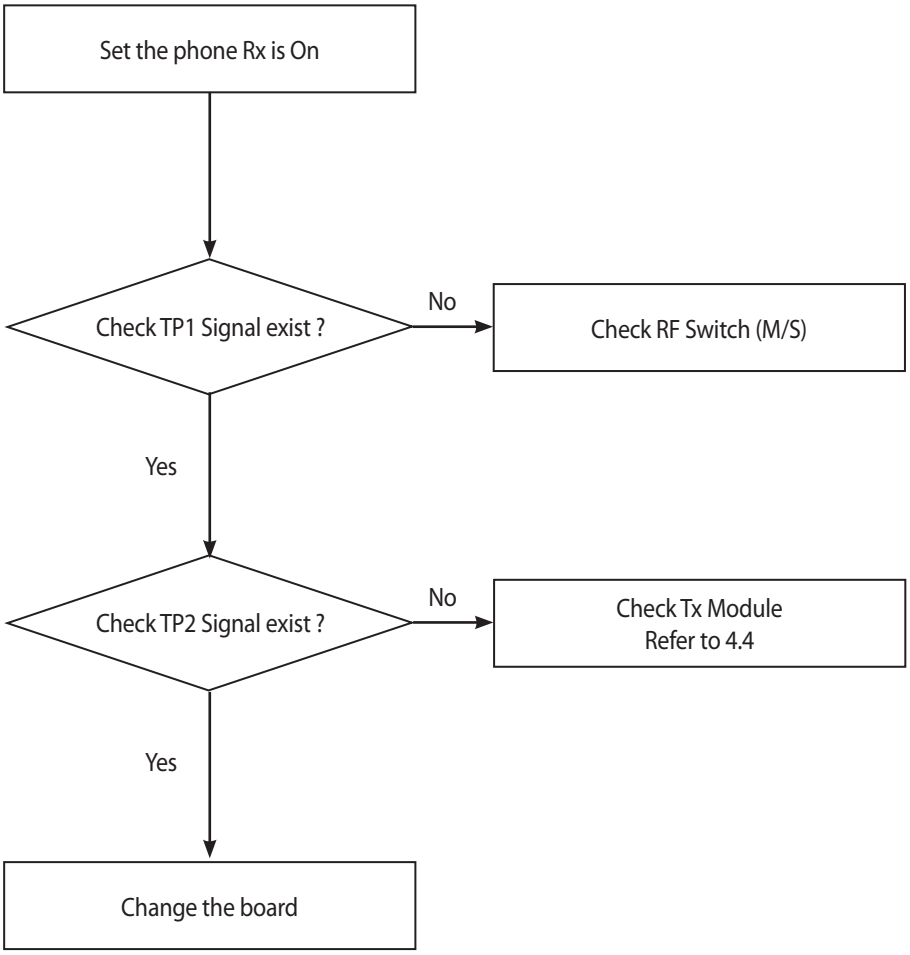




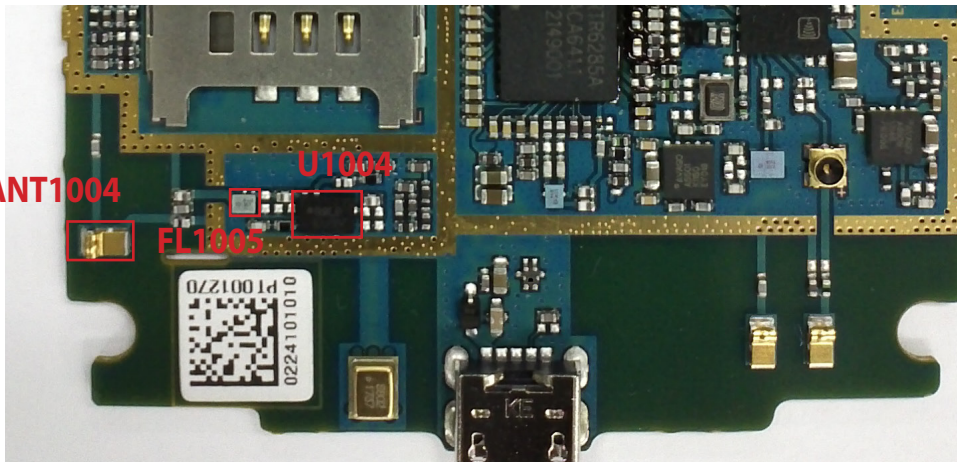
4.6.4 Checking RF Rx Block





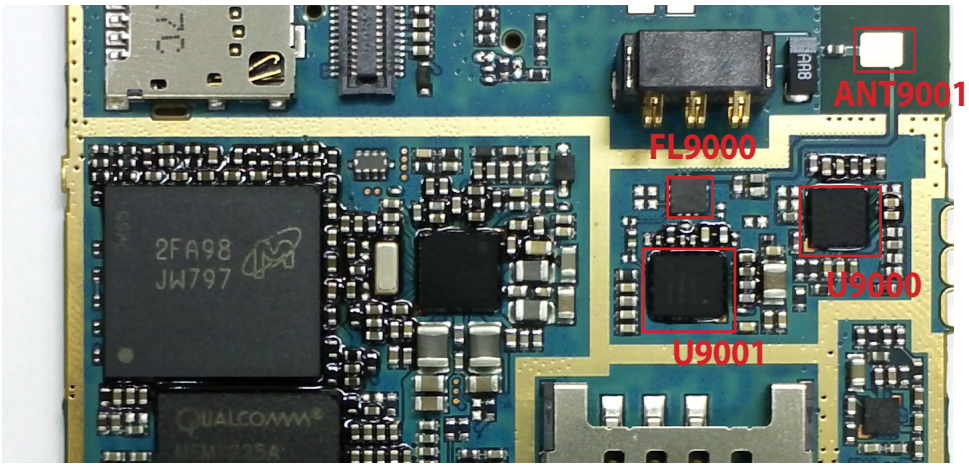


4.7 GPS/WIFI/BT RF Component



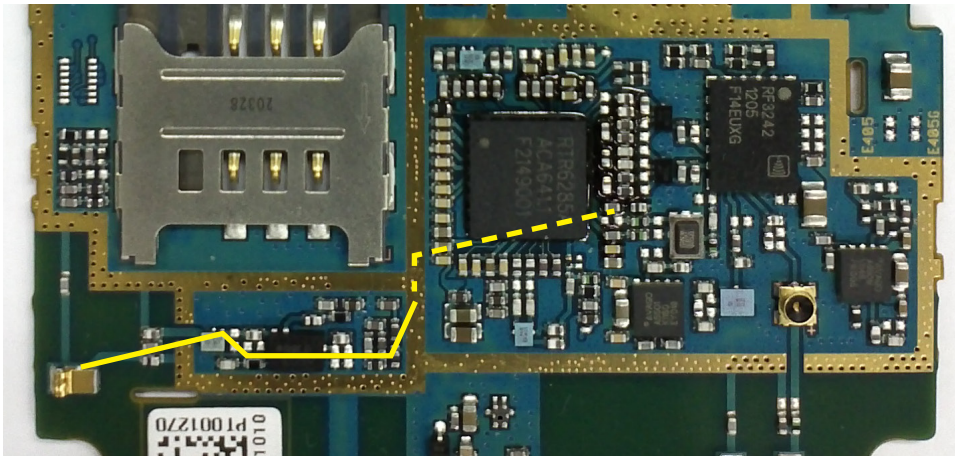
RF Component(GPS)

Reference	Description
ANT1004	C-CLIP connected to Carrier type antenna
FL1005	GPS SAW FILTER
U1004	GPS LNA



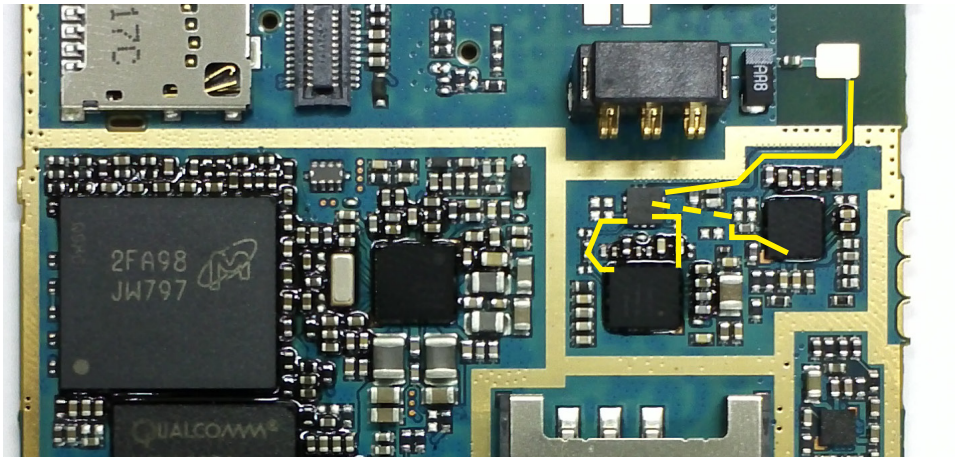
Reference	Description
ANT9001	ANTENNA PAD connected to Carrier type antenna
U9000	BT module
U9001	WiFi module
FL9000	FEM

4.8 GPS/WIFI/BT SIGNAL PATH



GPS Signal PATH (main board bottom)

GPS Rx PATH

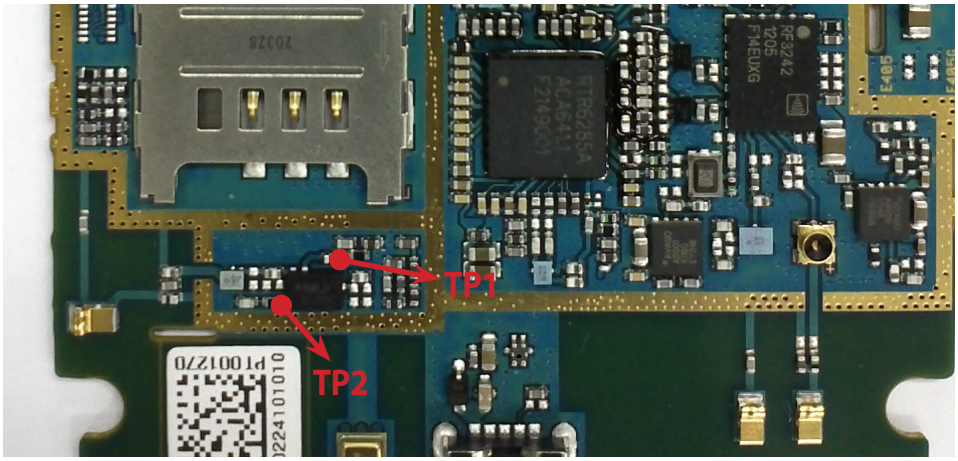


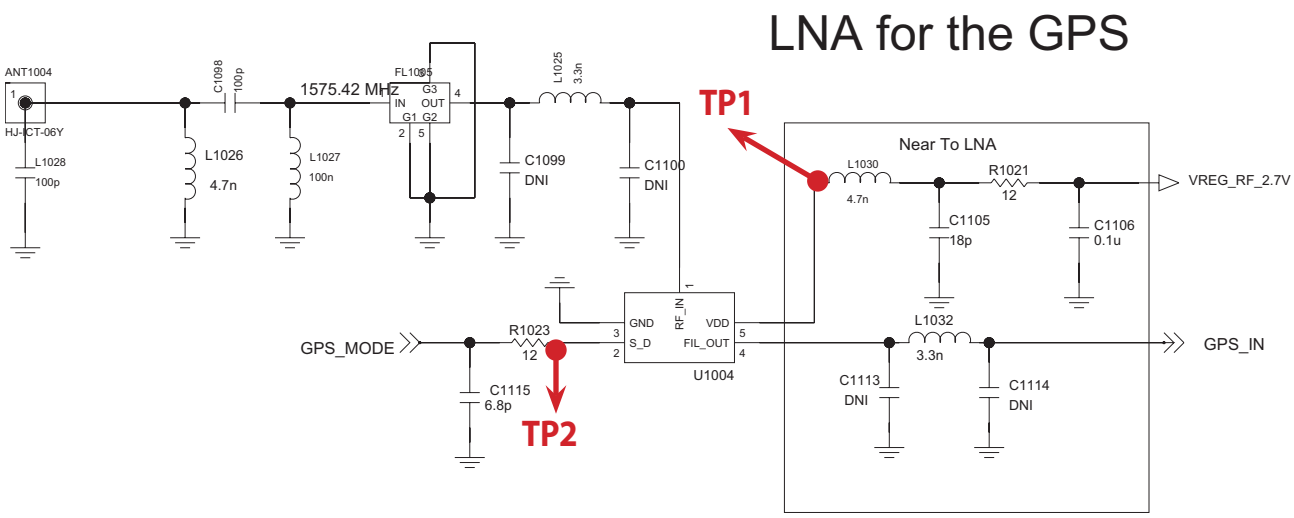
WiFi / BT Signal PATH

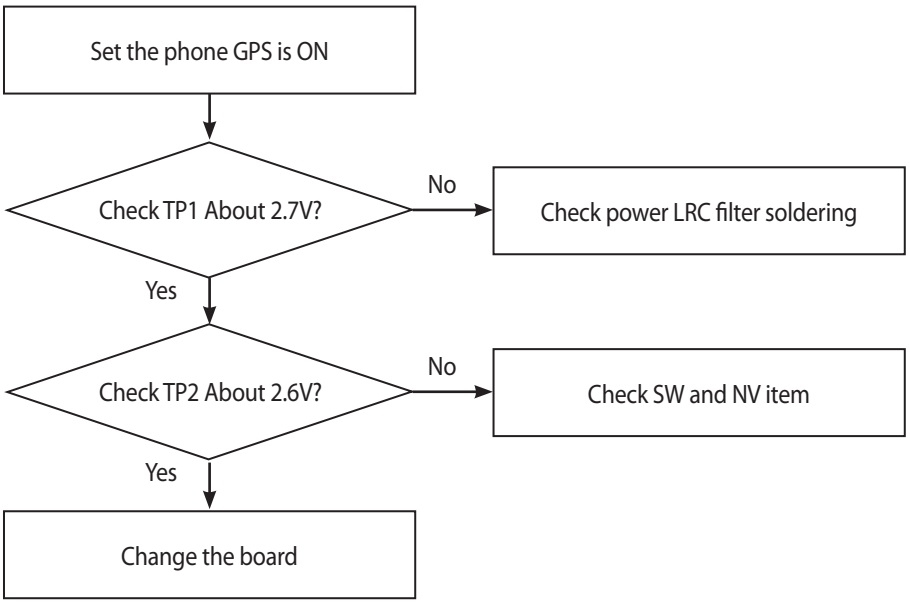
WiFi / BT Txand Rx PATH

4.9 GPS/WIFI/BT Trouble shooting

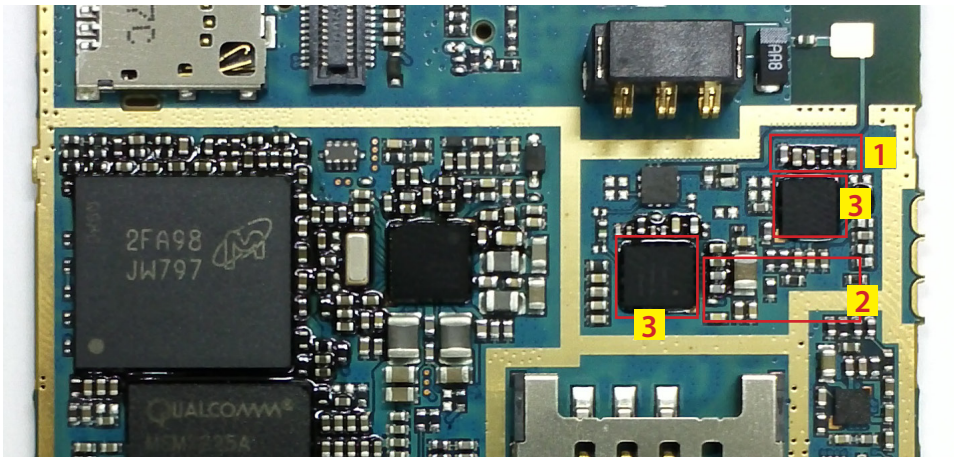
4.9.1 A-GPS Block

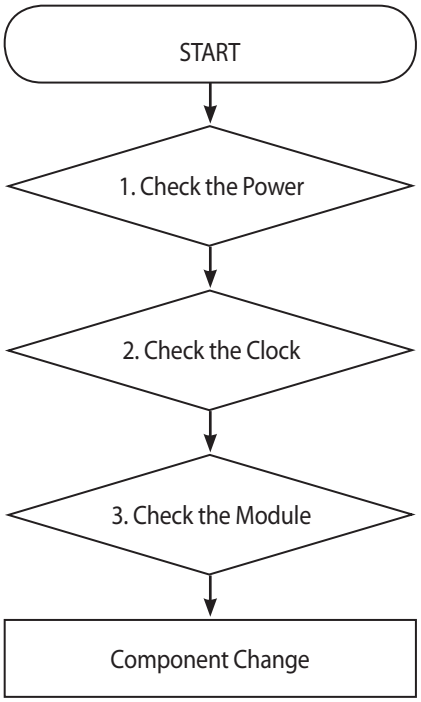






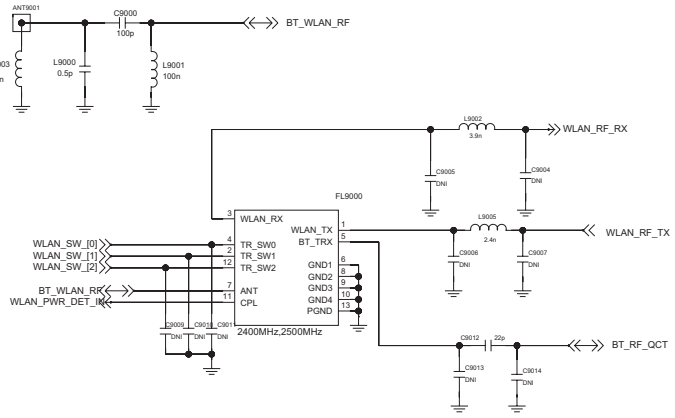
4.9.2 WLAN/BT/FM Block





Module part

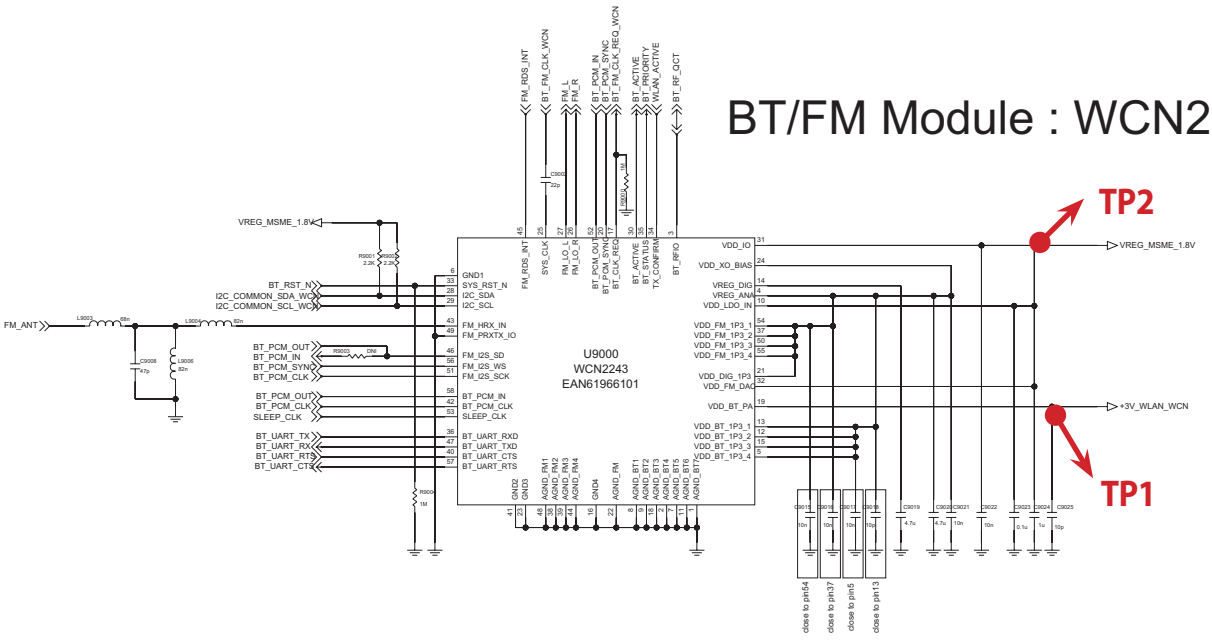
BT/WI-FI FRONT-END

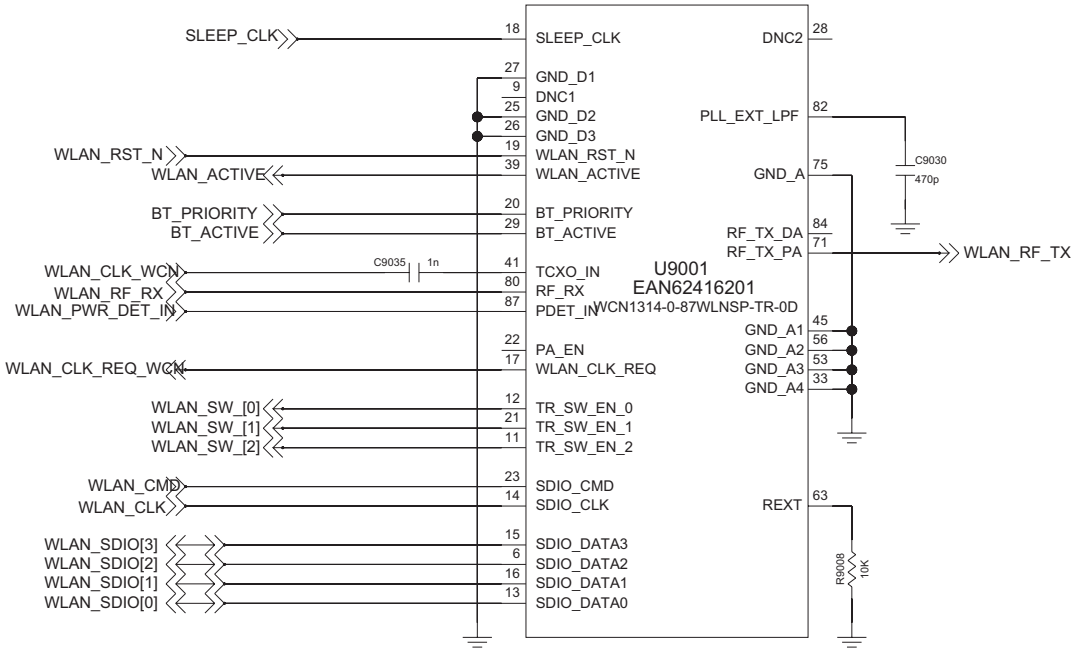


ANTENNA SWITCH MODULE LOGIC

	SW0	SW1	SW2
WiFi RX-ANT	HIGH	LOW	LOW
WiFi TX-ANT	LOW	HIGH	LOW
BT-ANT	LOW	LOW	HIGH

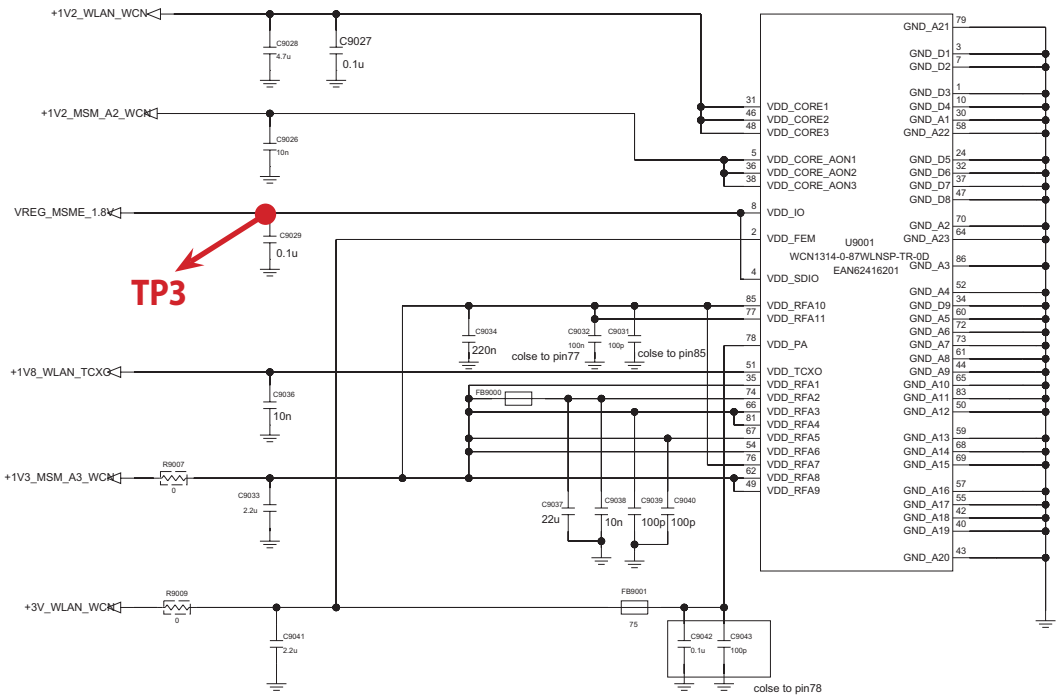
BT/FM Module : WCN2243

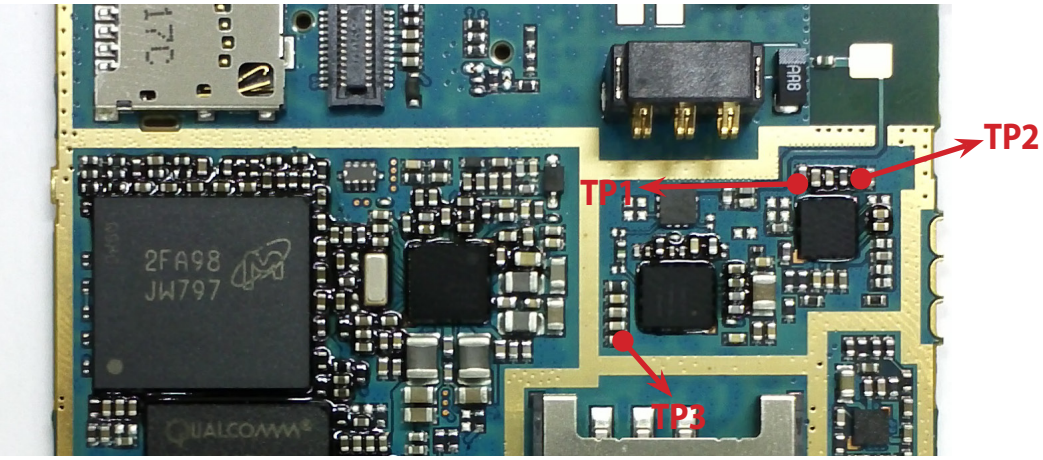




WI-FI : WCN1314

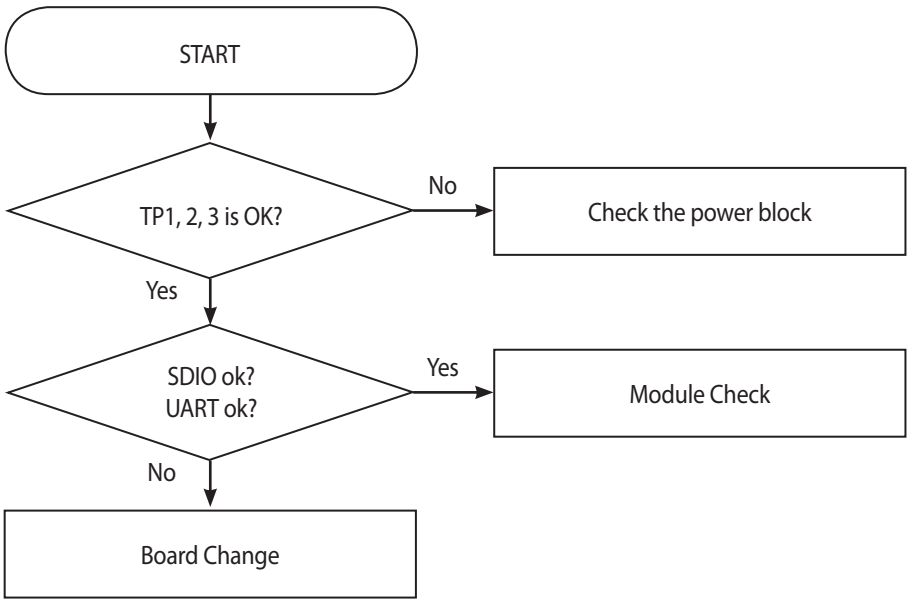
WiFi : WCN 1314





Test point Description

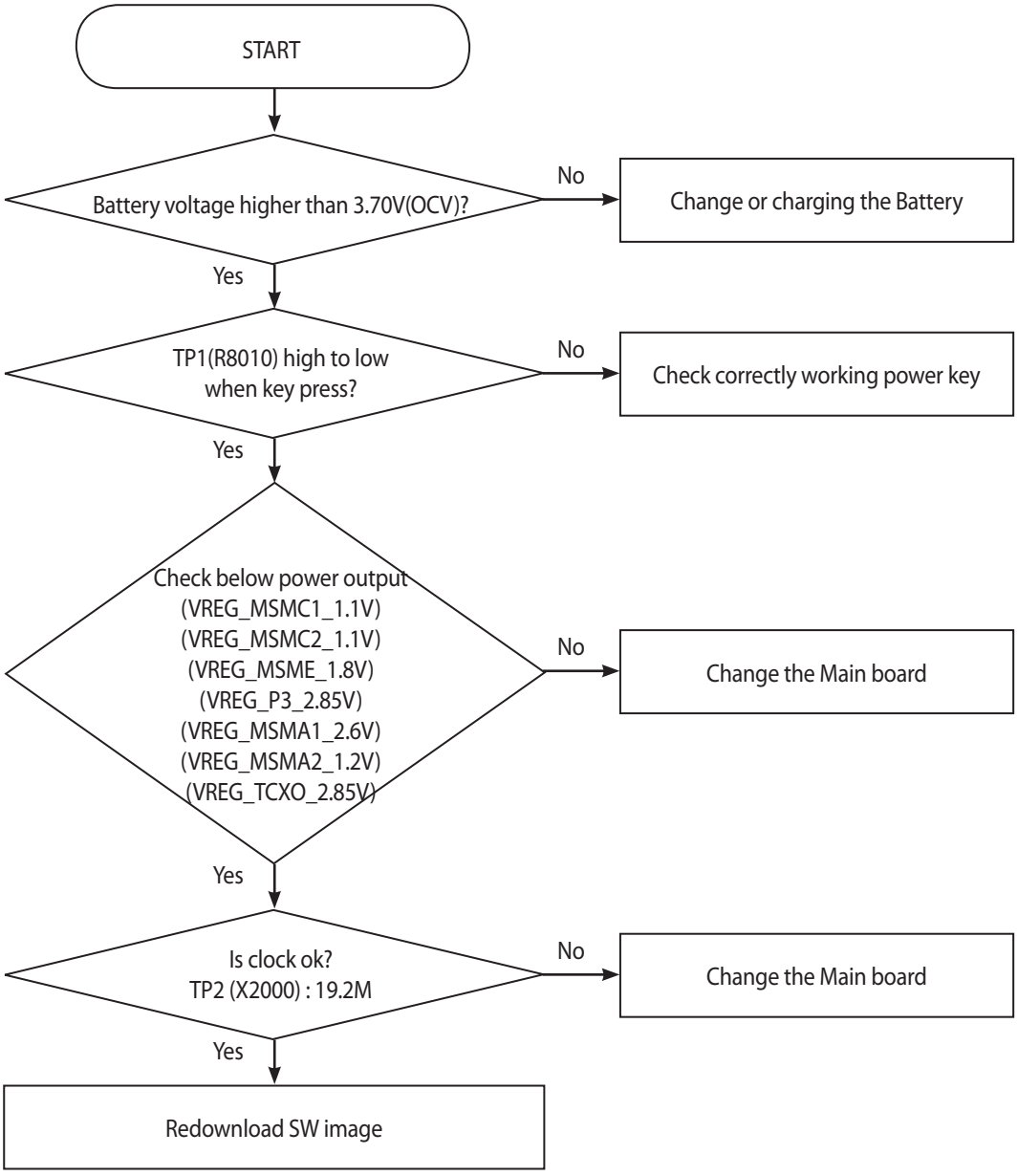
Test point	Net name	Description
TP1	+3V_WLAN_WCN	Power for BT/WiFi BB core and WiFi power Amp. (V Batt)
TP2	VREG_MSME_1.8V	Power for BT power Amp. (1.8V)
TP3	VREG_MSME_1.8V	Power for host interface (1.8V)

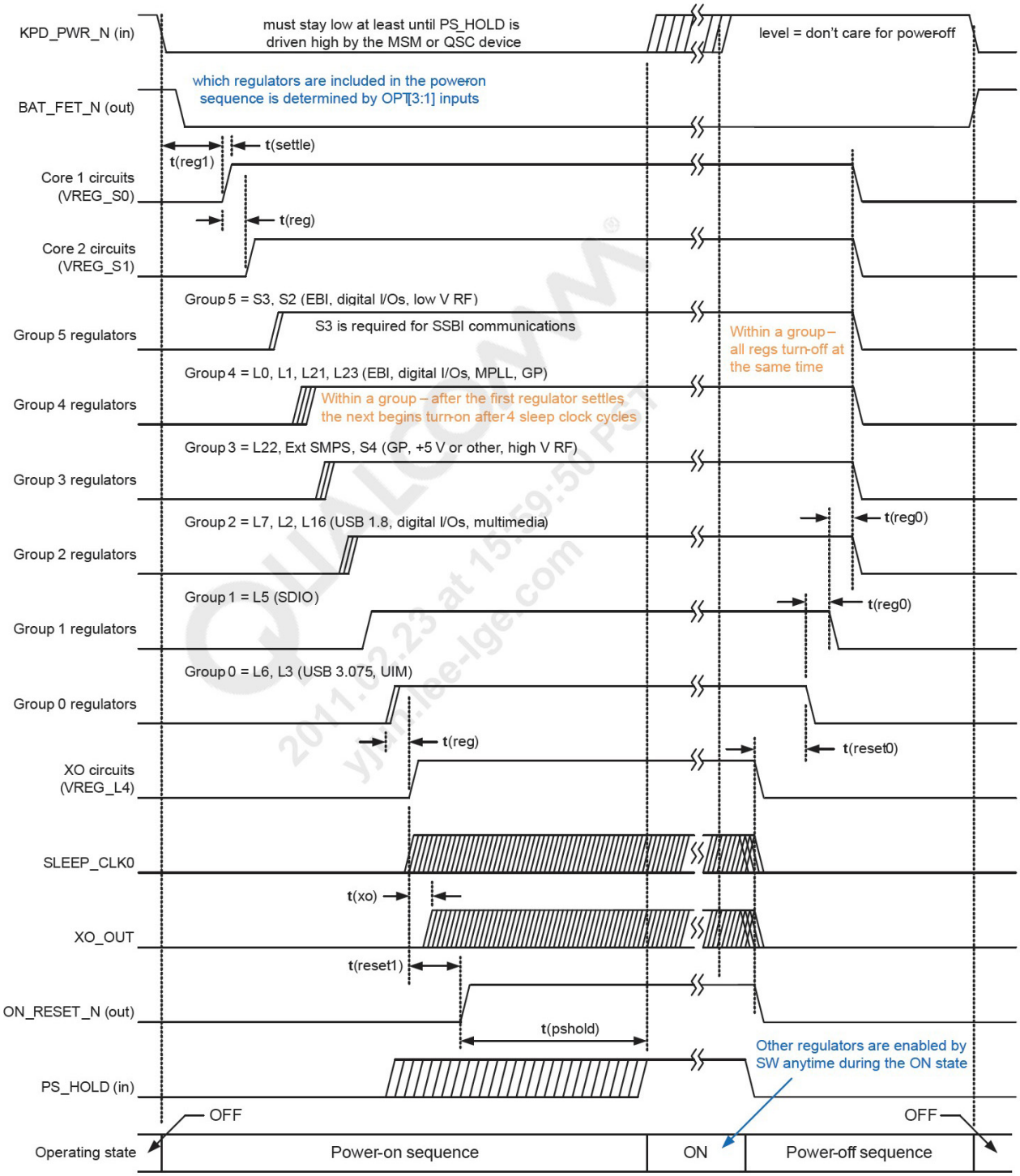


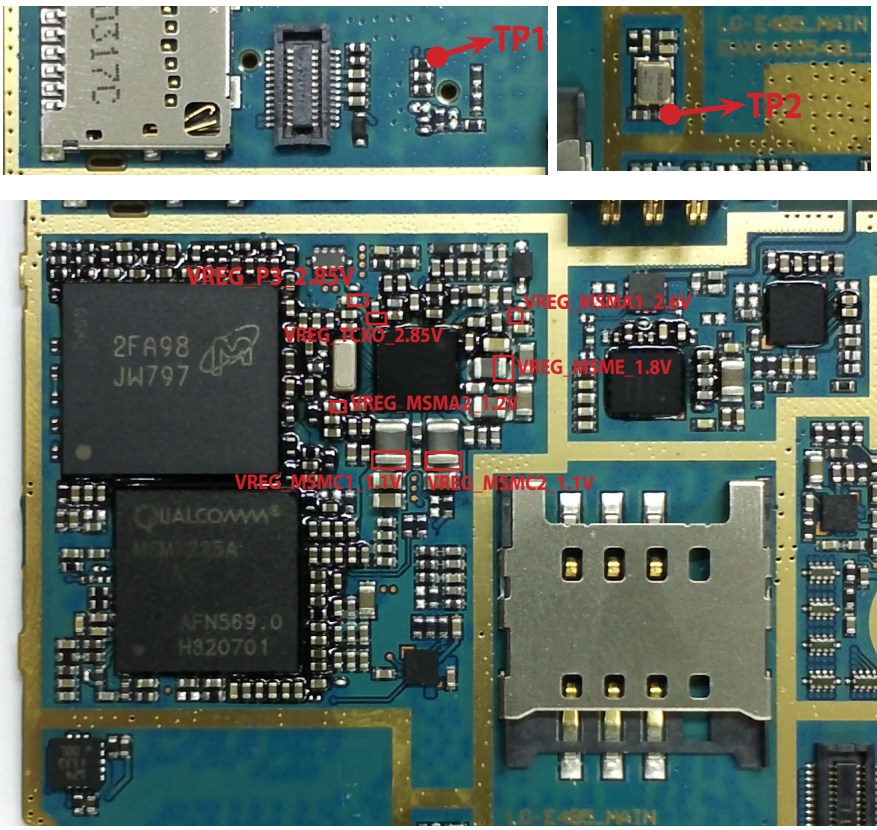
4.10 Power ON Trouble Shooting

Power On sequence of E405 is :

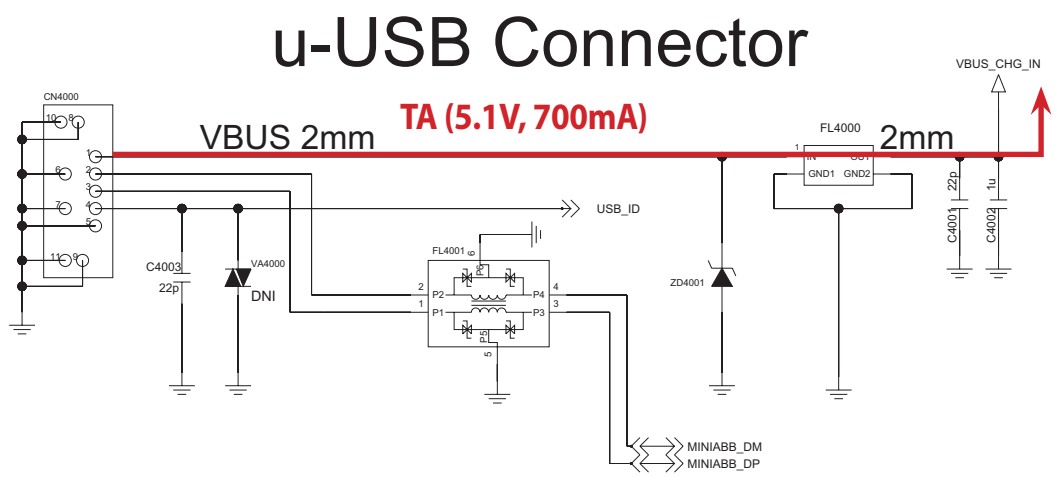
Power key press -> KPD_PWR_N go to low -> PM8029 Power Up -> VREG_MSMC1_1.1V (L400), VREG_MSMC2_1.1V (L401), VREG_MSME_1.8V (L402), VREG_P3_2.85V (C453), VREG_MSMA1_2.6V (C448), VREG_MSMA2_1.2V (C444) VREG_TCXO_2.85V (C449) power ON -> Phone booting and PS_HOLD(D401) go to High

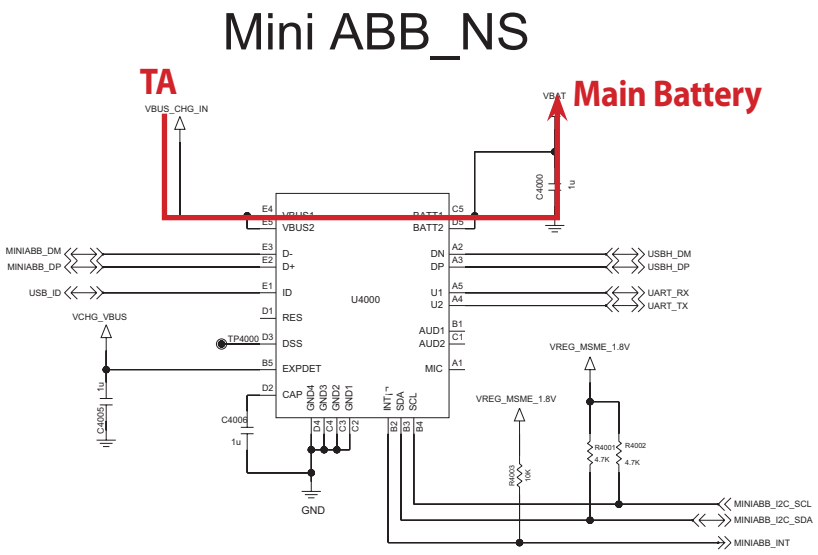






4.11 Charging Trouble Shooting





1. Charging Procedure

- Connect TA or u-USB Cable
- Control the charging current by LP8727-B IC
- Charging current flows into the battery

2. Check Point

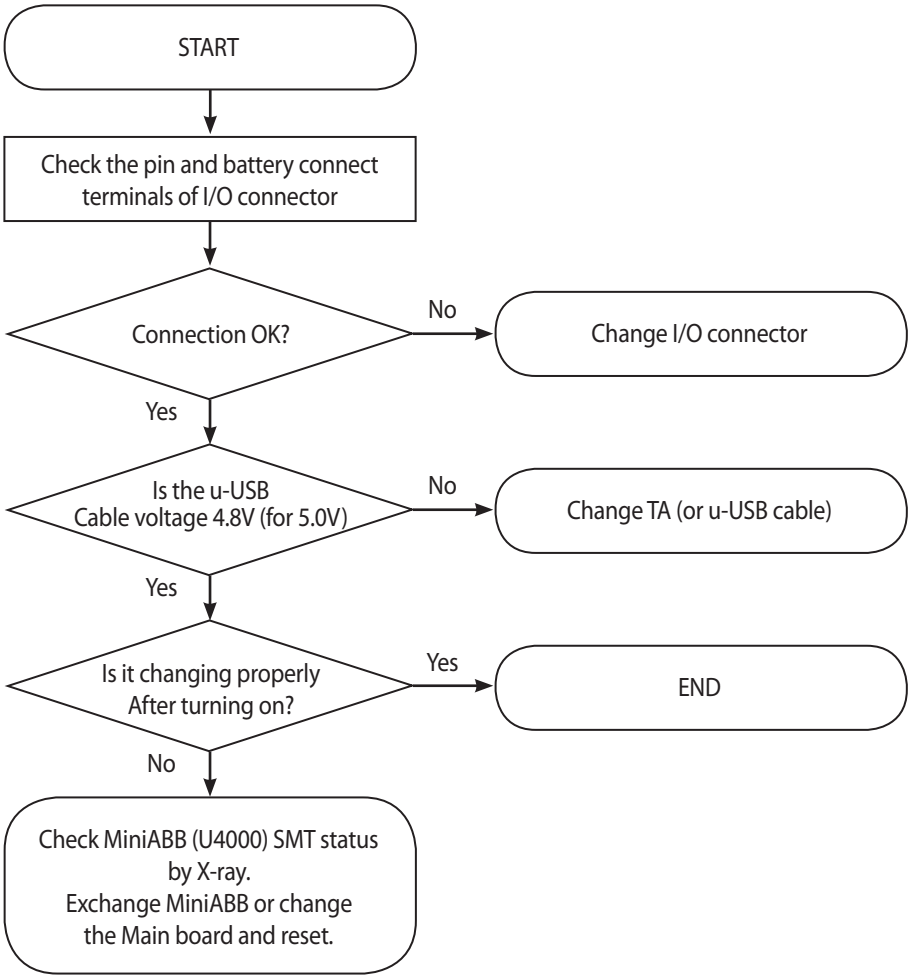
- Connection of TA or USB Cable
- Charging IC (LP8727-B)
- Battery

3. Troubleshooting Setup

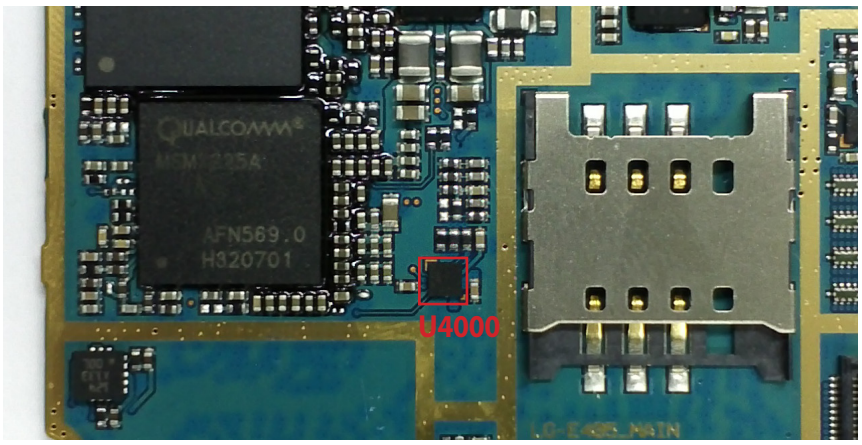
- Connect TA and battery to the phone

4. Troubleshooting Procedure

- Check the charger (TA or USB Cable)
- Check the OVP Circuit
- Check the Charging IC
- Check the battery

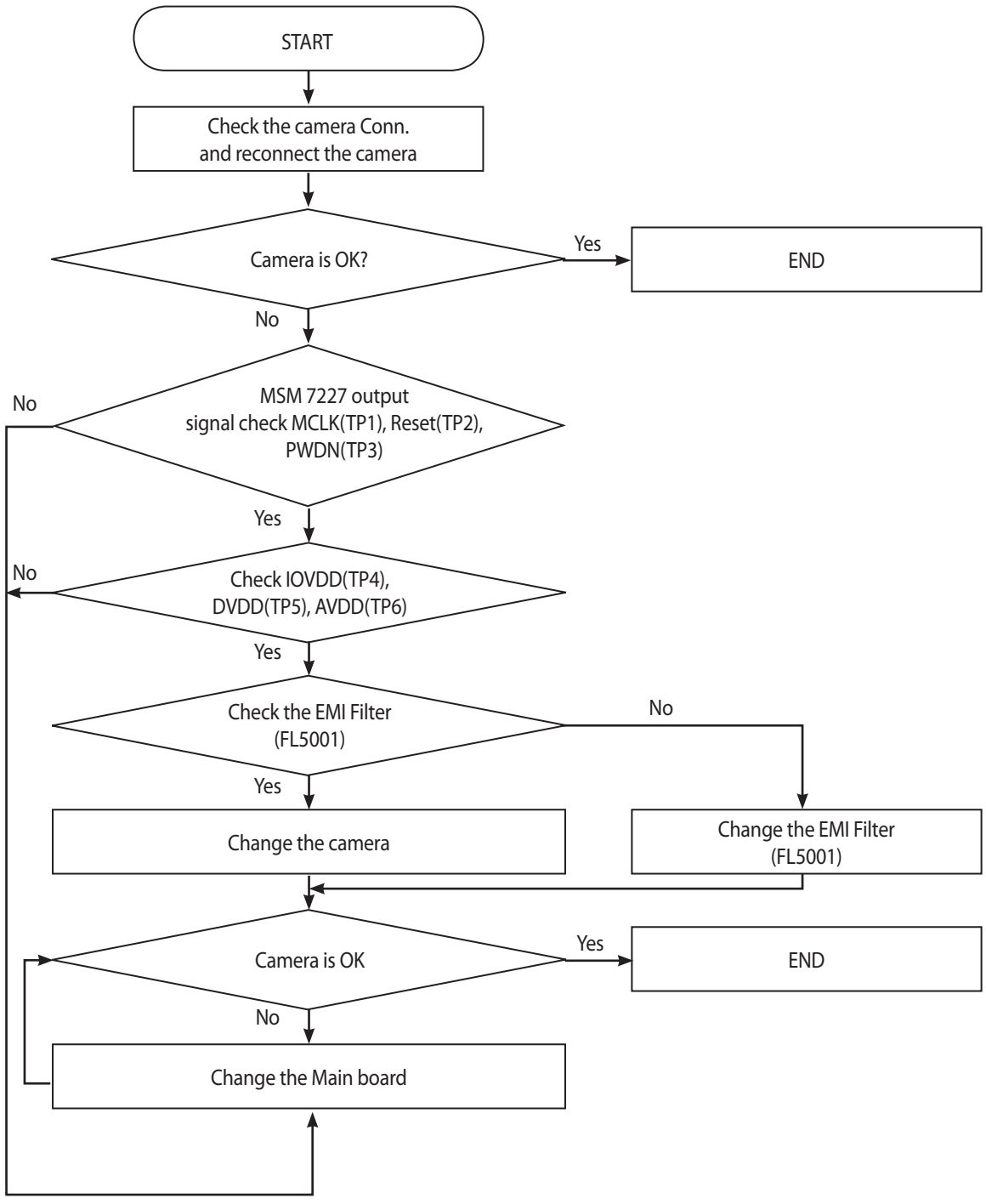


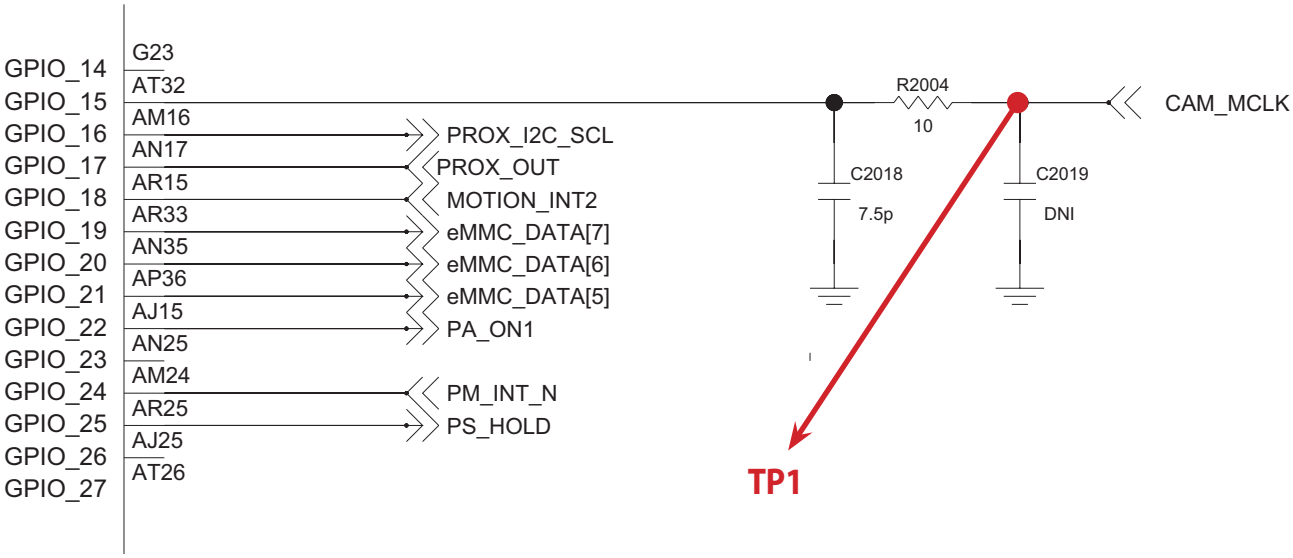
Charger Troubleshoot Flow



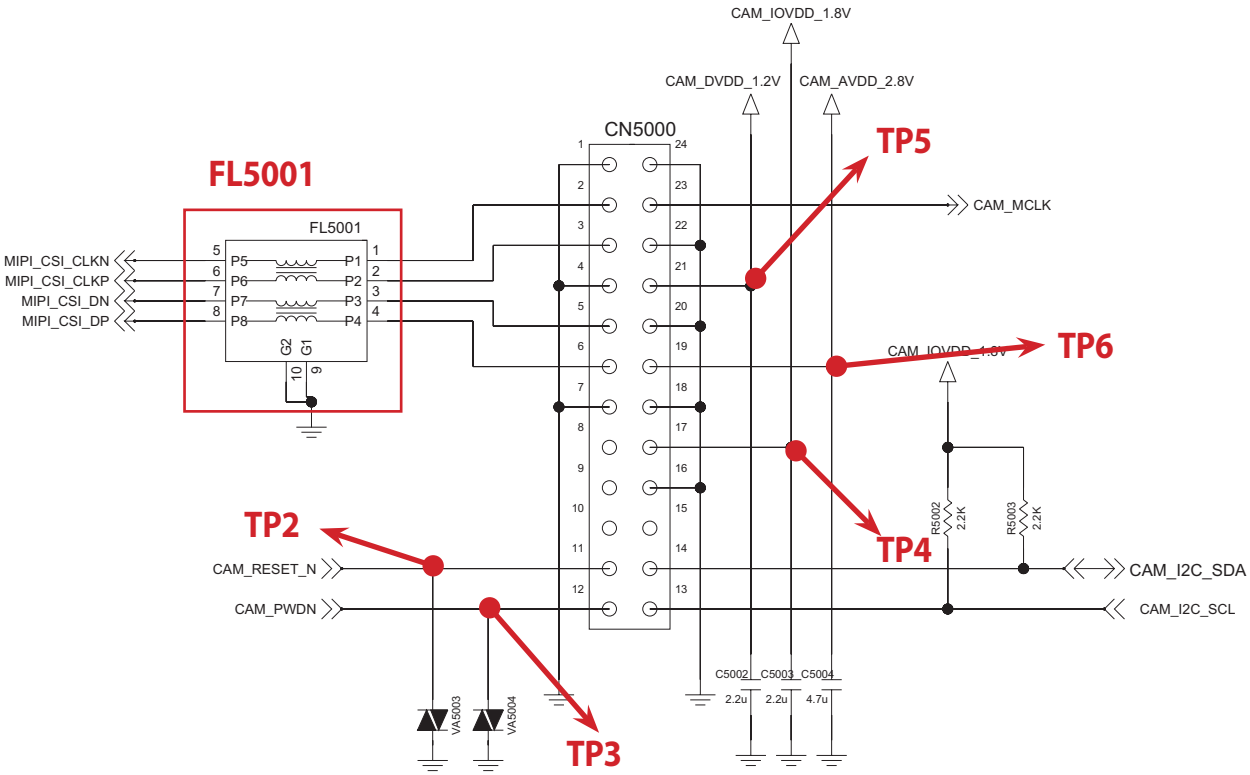
4.12 3MFF Camera Trouble Shooting

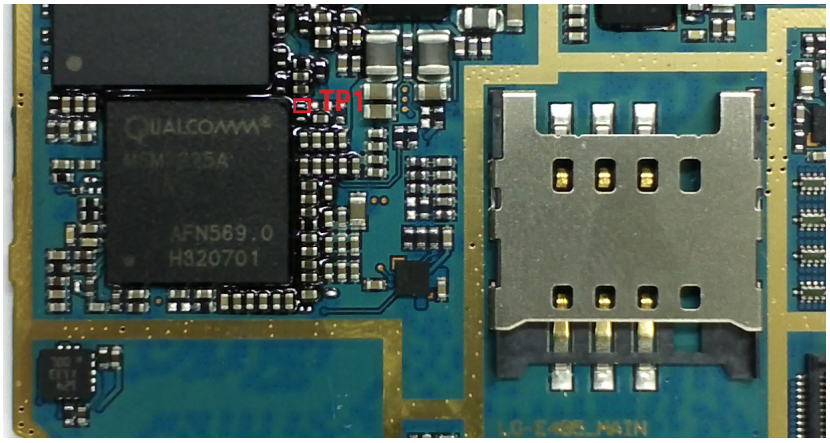
3M camera control signals are generated by MSM7225A.

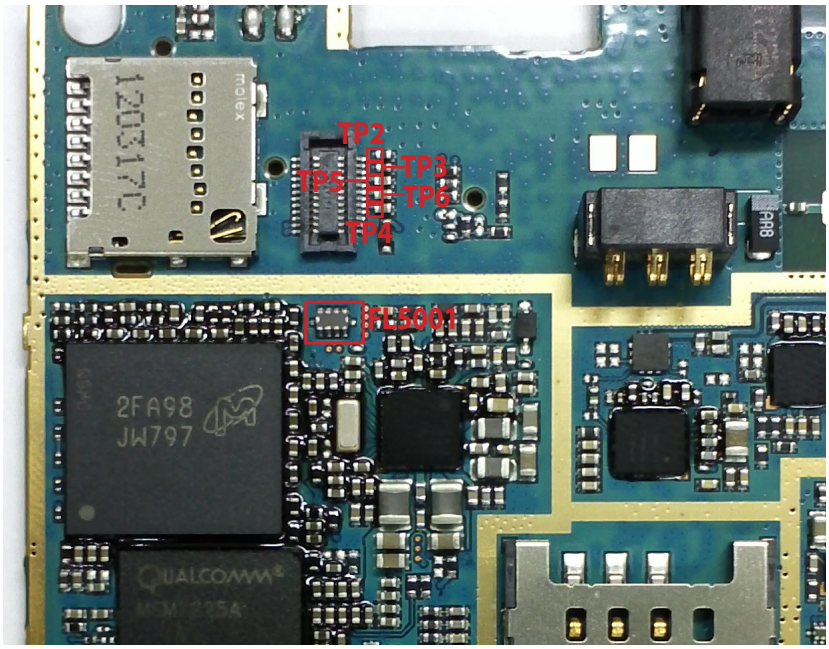




3M CAMERA

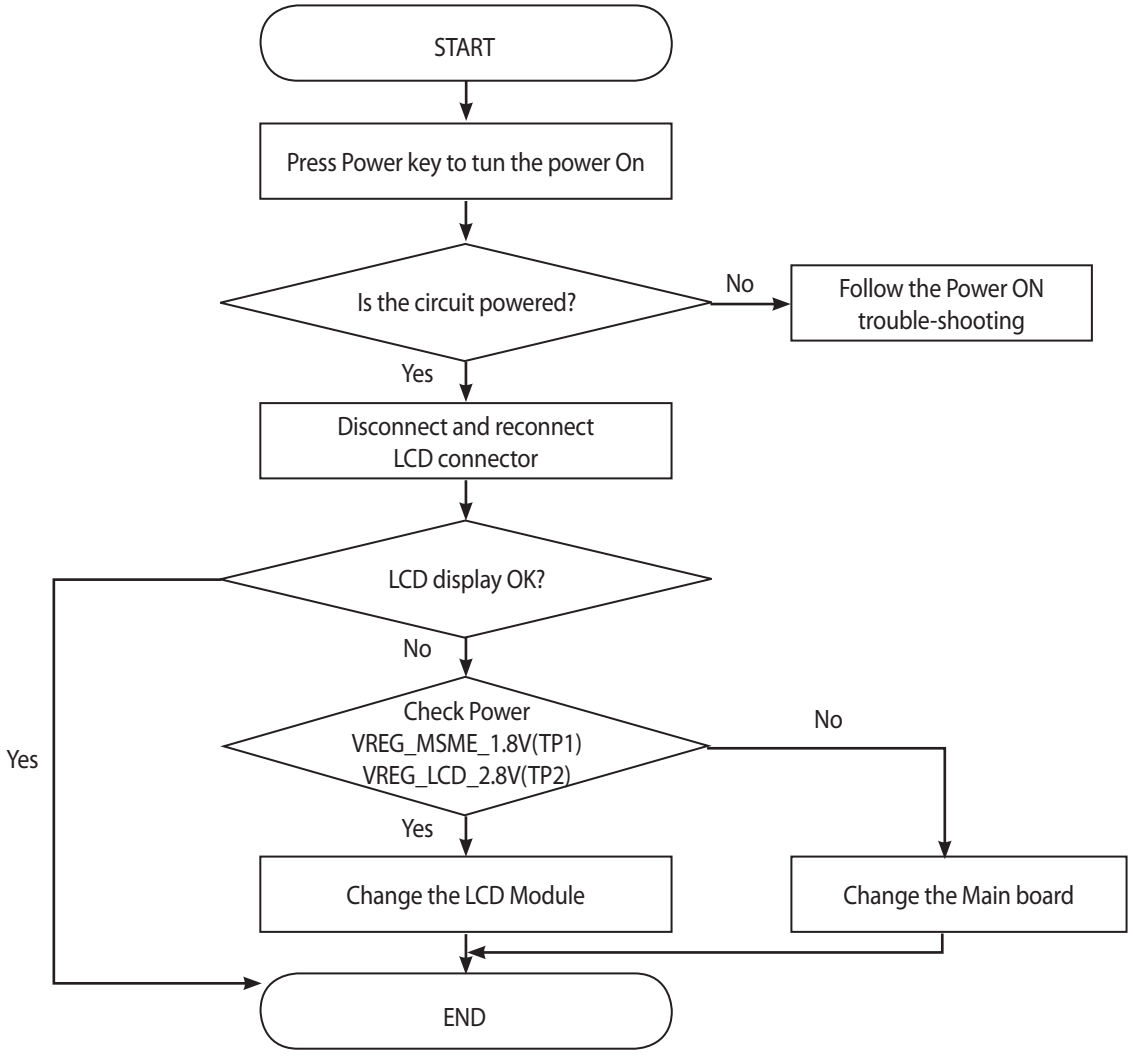


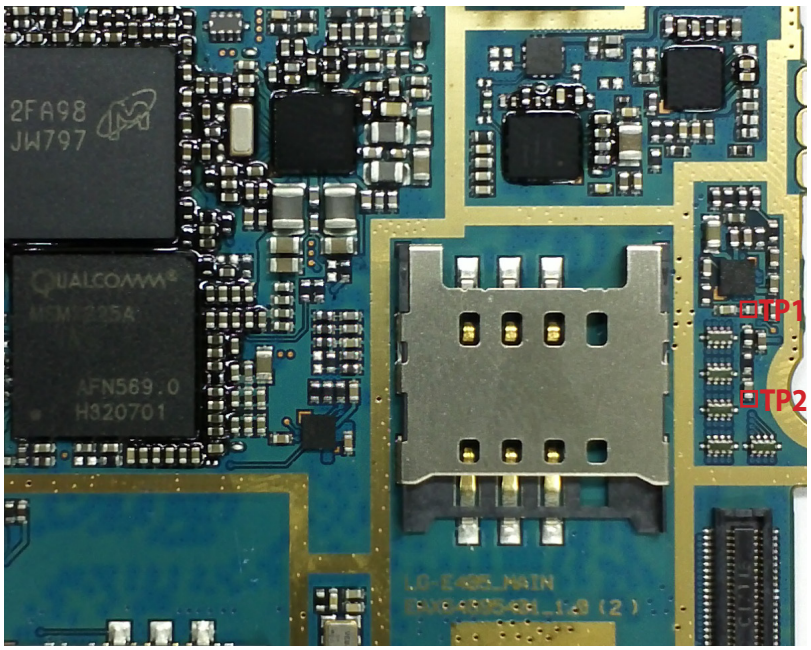




4.13 Main LCD trouble

Main LCD control signals are generated by MSM7225A. Those signal's path are : MSM7225A → LCD Module

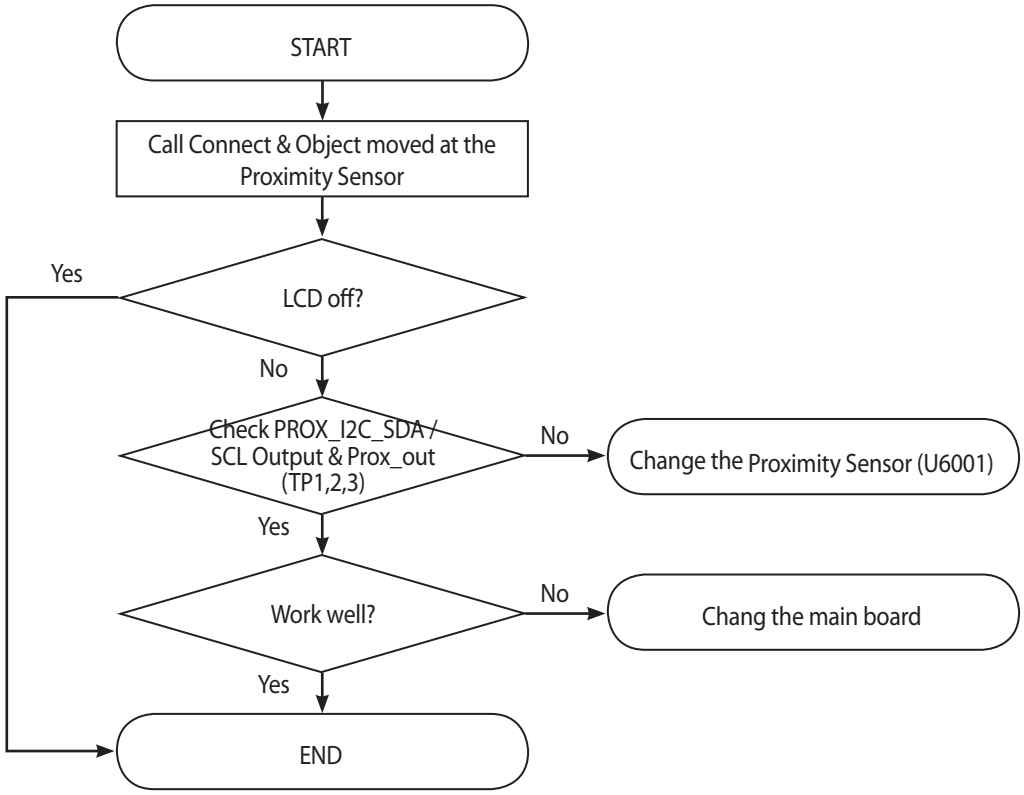




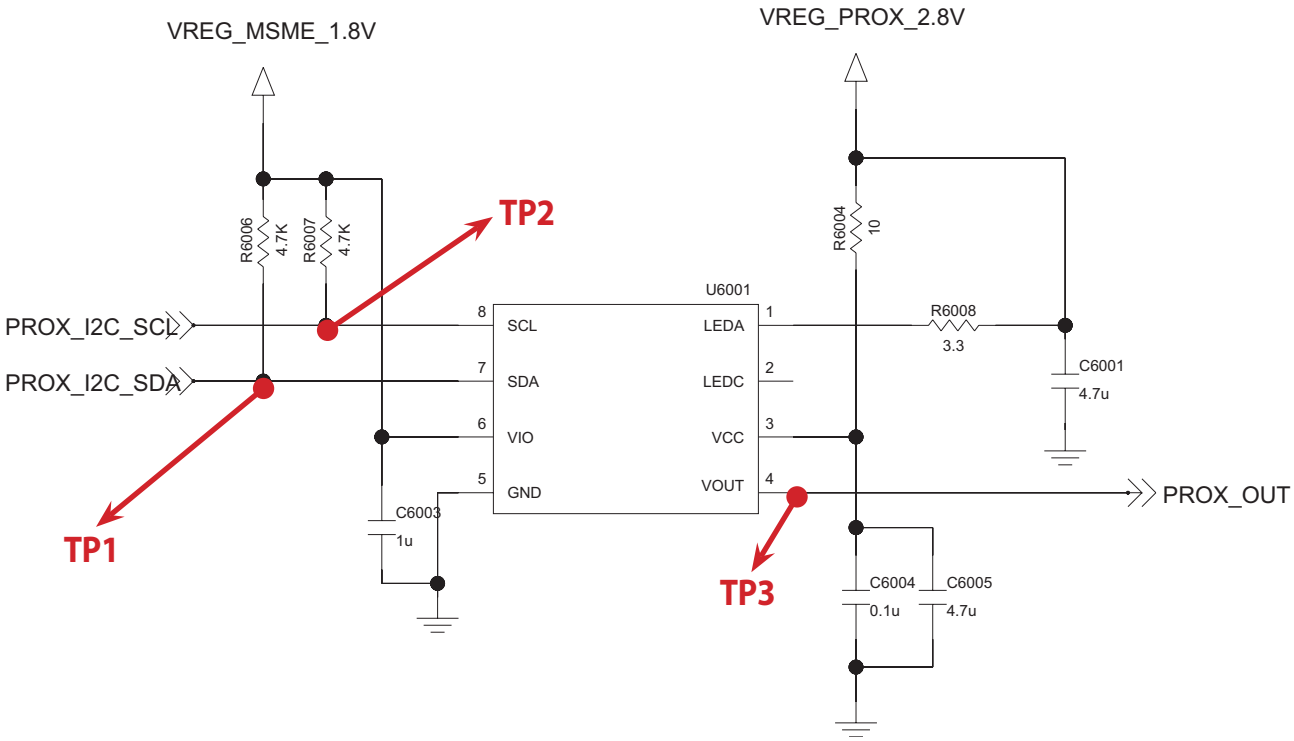
4.14 Proximity Sensor on/off Trouble Shooting

Proximity Sensor is worked as below :

Call connected → Object moved at the sensor → Control the screen's on/off operation automatically



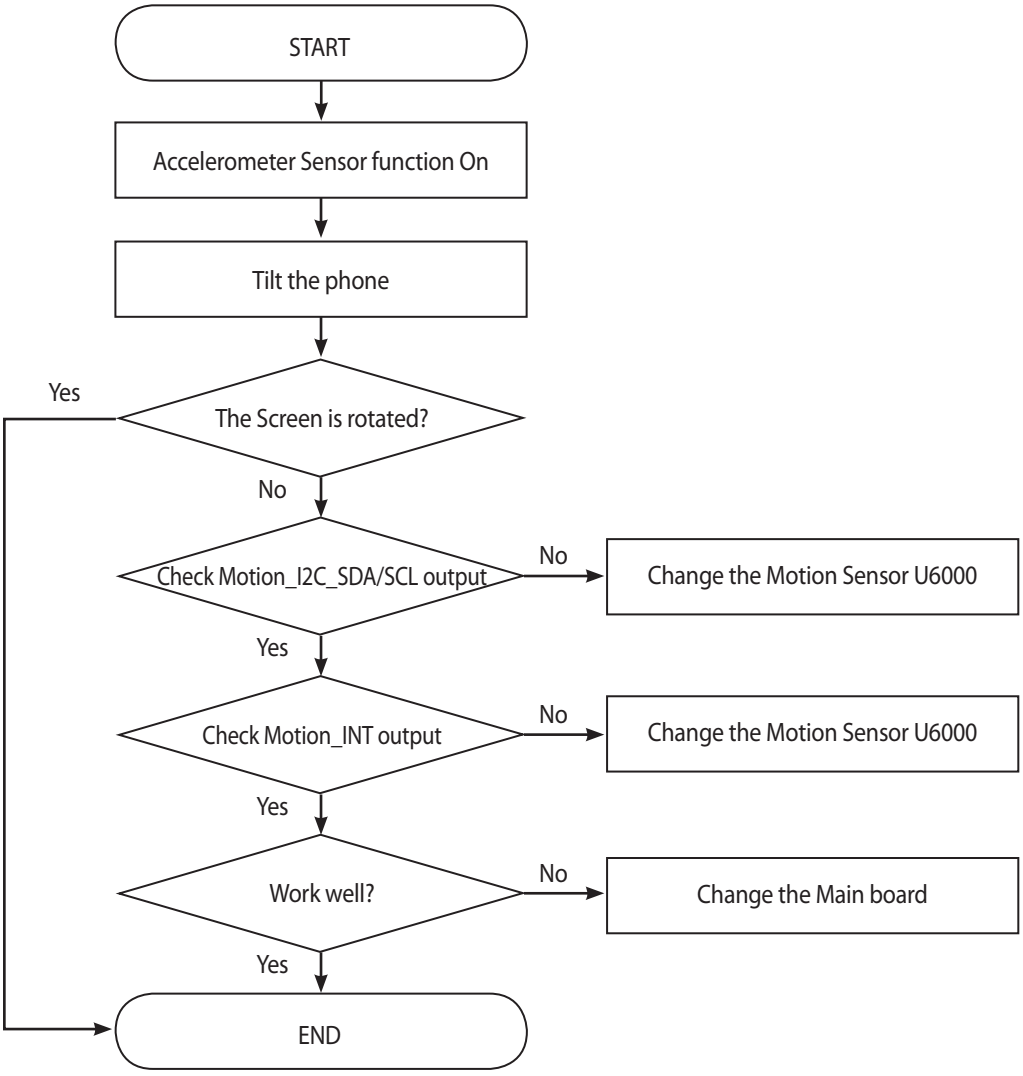
Measurement
VREG_MSME_1.8V
VREG_PROX_2.6V
PROX_OUT
PROX_I2C_SCL / SDA



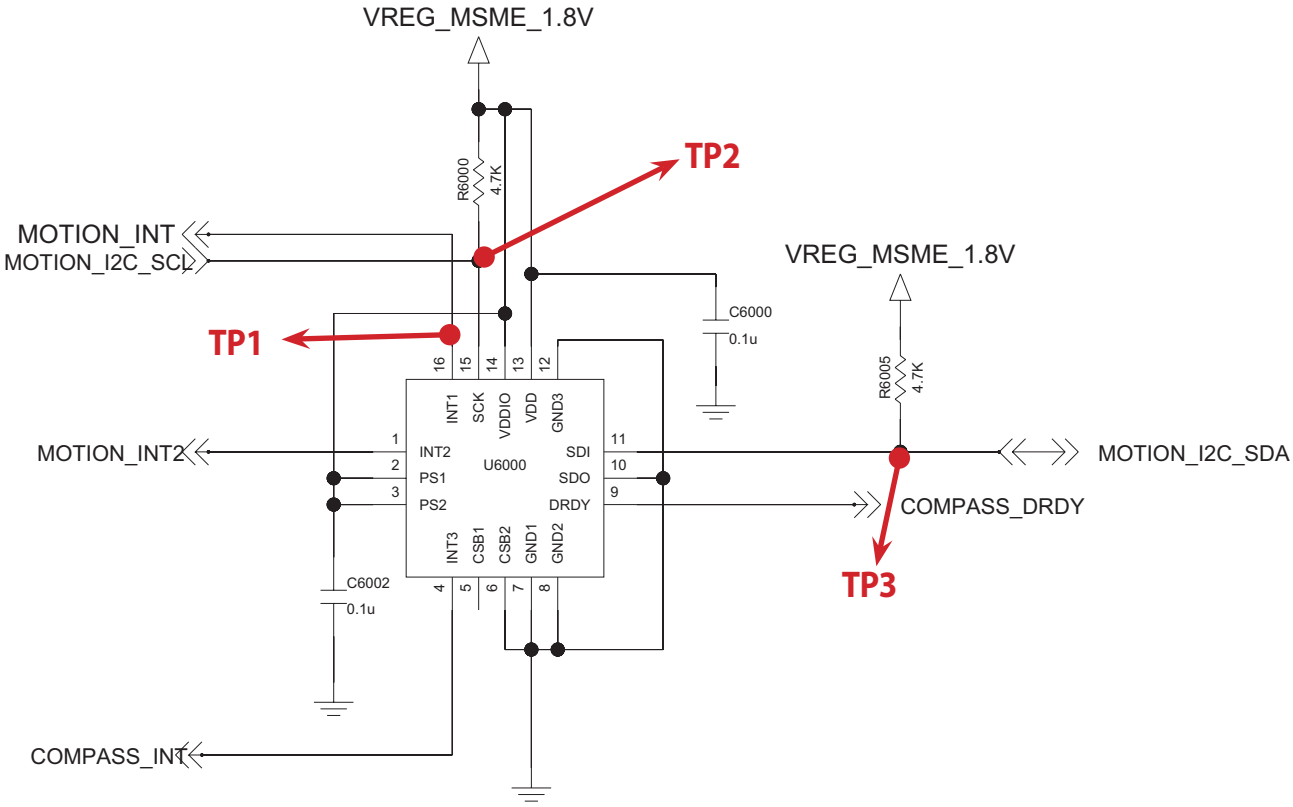
4.15 Motion Sensor on/off Trouble Shooting

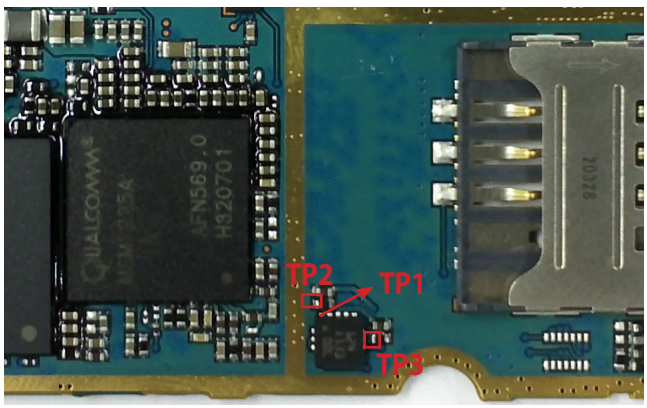
Motion Sensor is worked as below :

Accelerometer Sensor function On → Tilt the phone (90˚) → The screen is had rotated automatic



Measurement
VREG_MSME_1.8V
MOTION_INT
MOTION_I2C_SDA / SCL

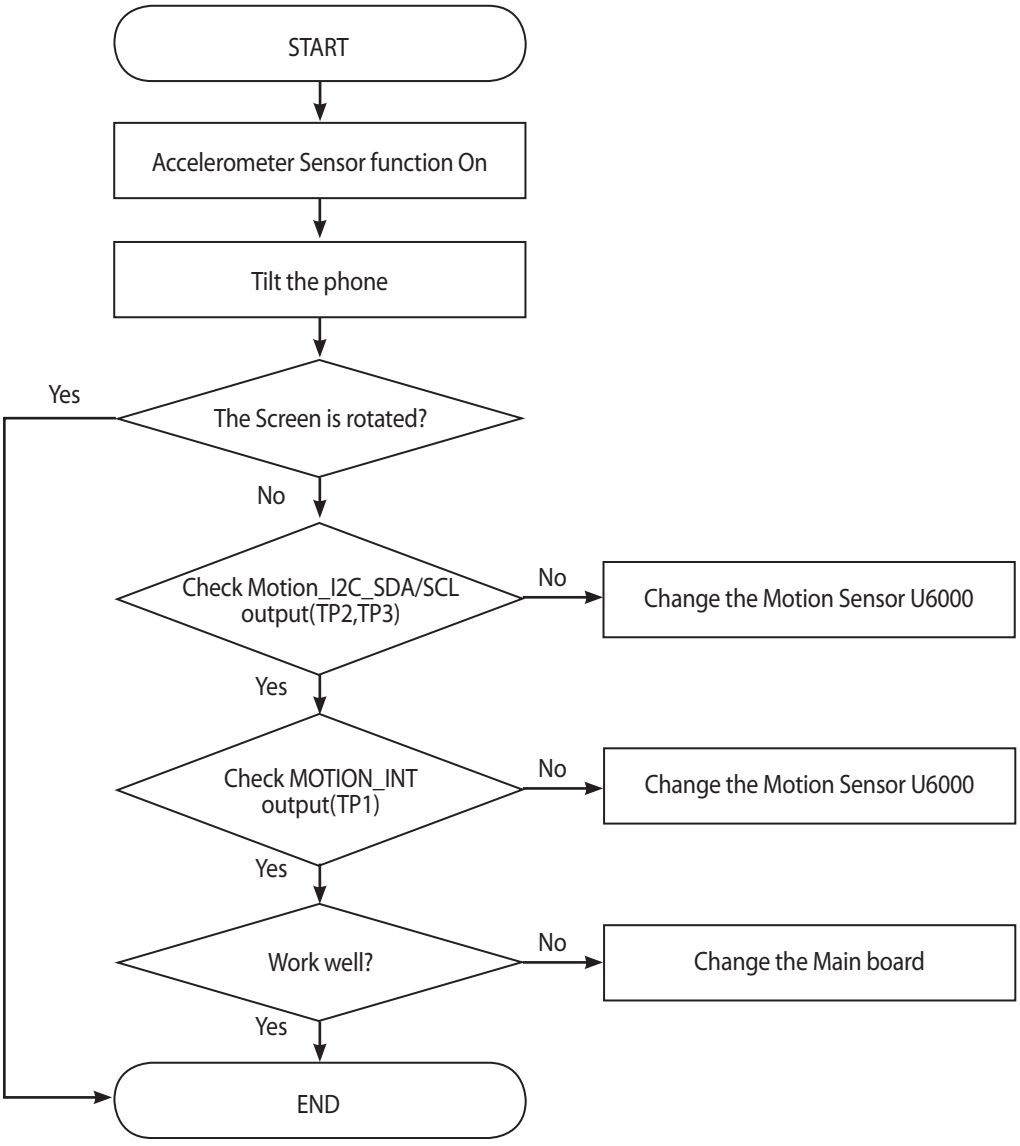




4.16 Compass Sensor on/off Trouble Shooting

Compass Sensor is worked as below :

Compass Sensor function On

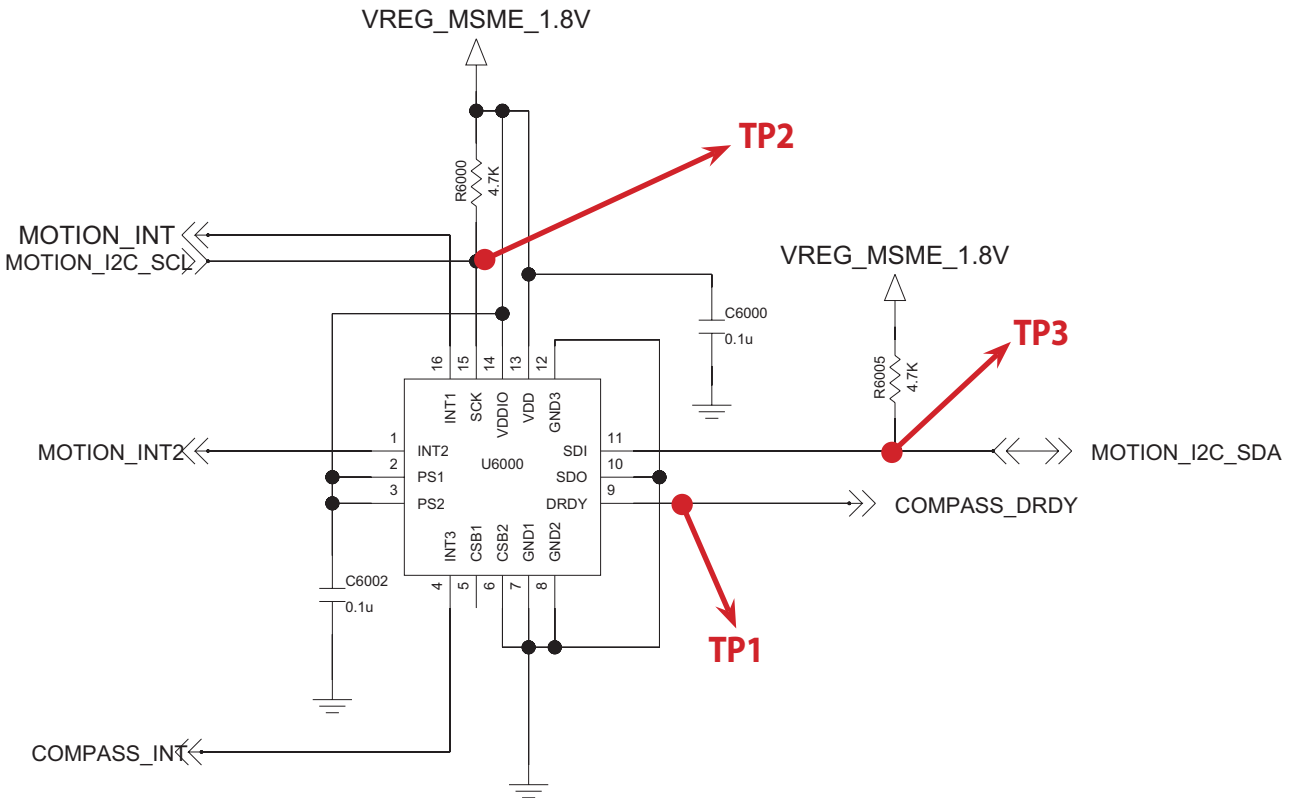


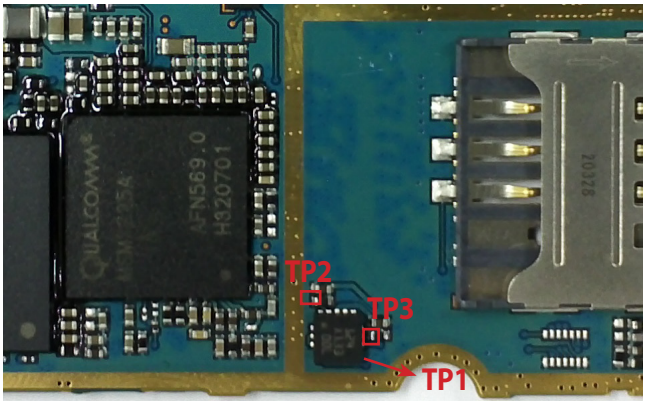
Measurement

VREG_MSME_1.8V

MOTION_I2C_SCL / SDA

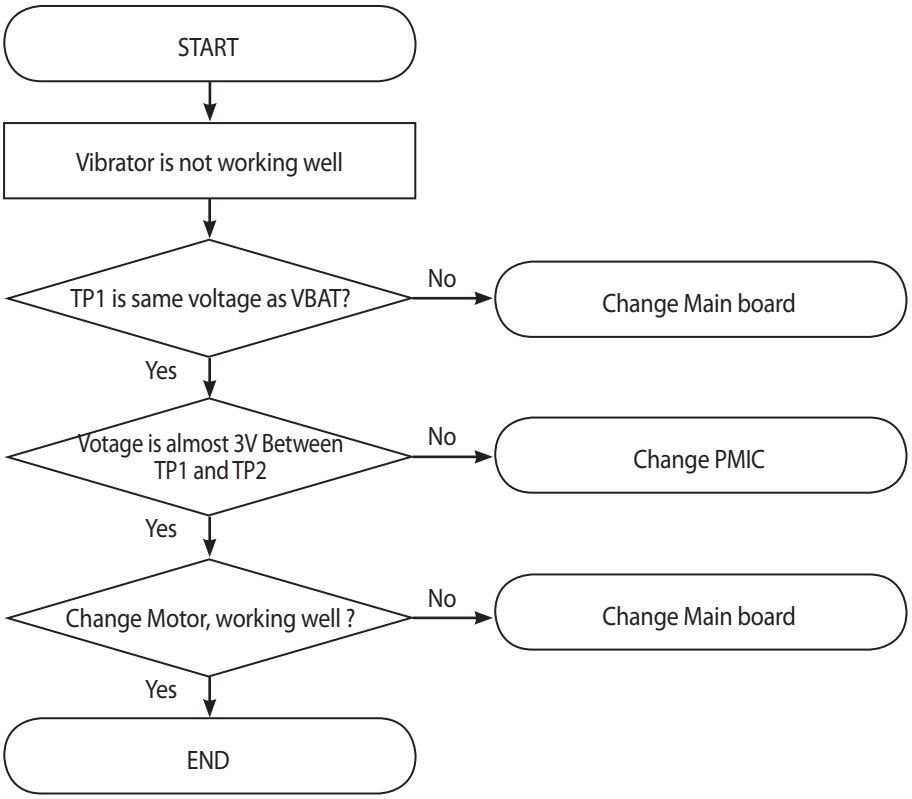
COMPASS_DRDY



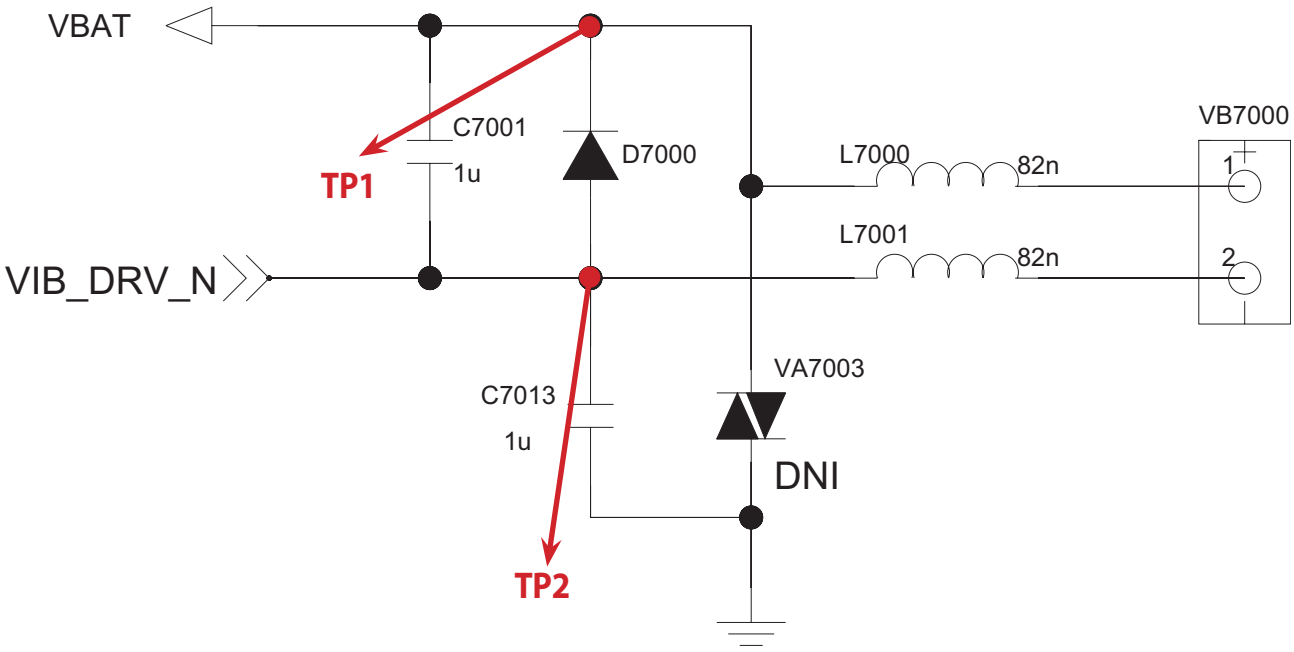


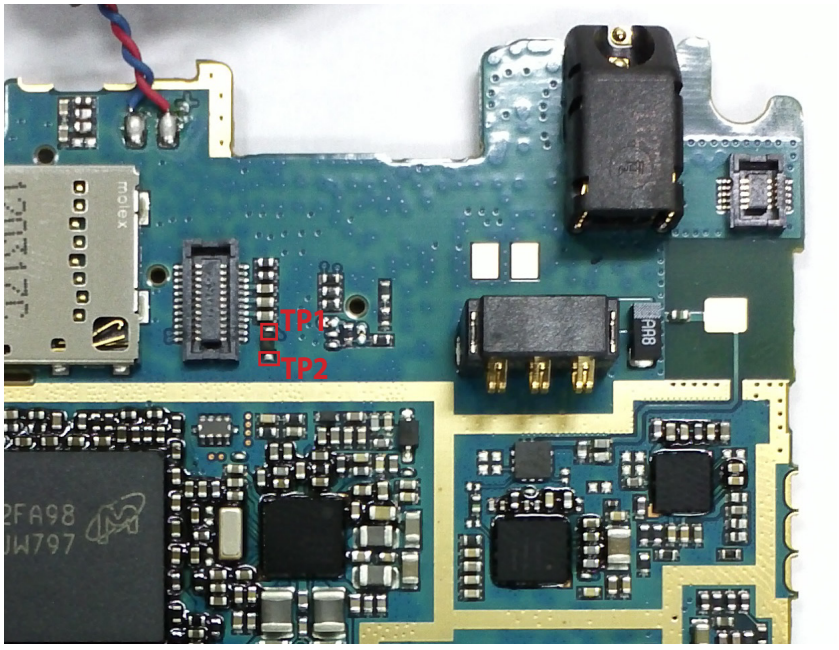
4.17 DC Motor Trouble Shooting

Vibrator is worked as below

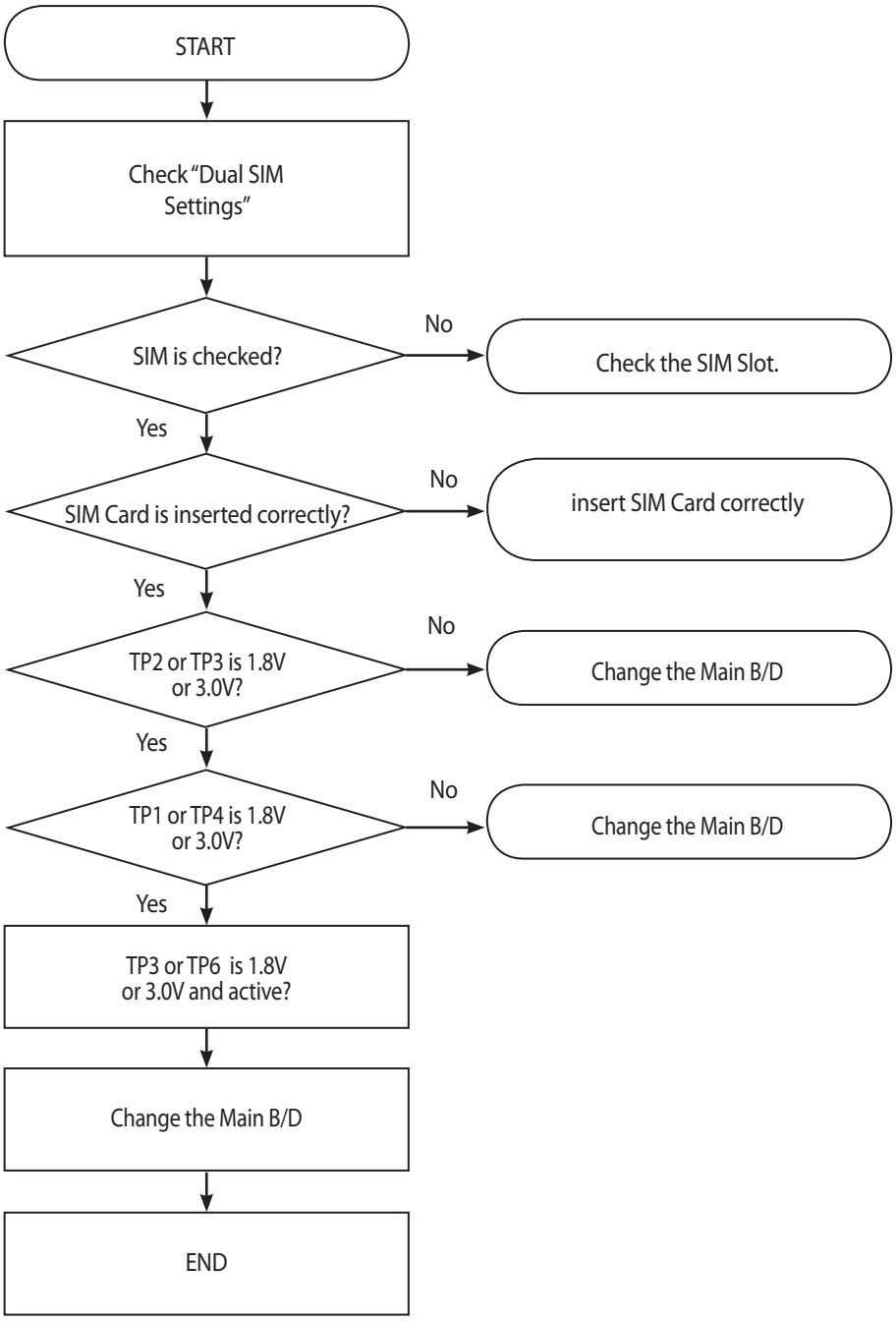


Measurement
VBAT
VIB_DRV_N





4.18 SIM detect Trouble Shooting

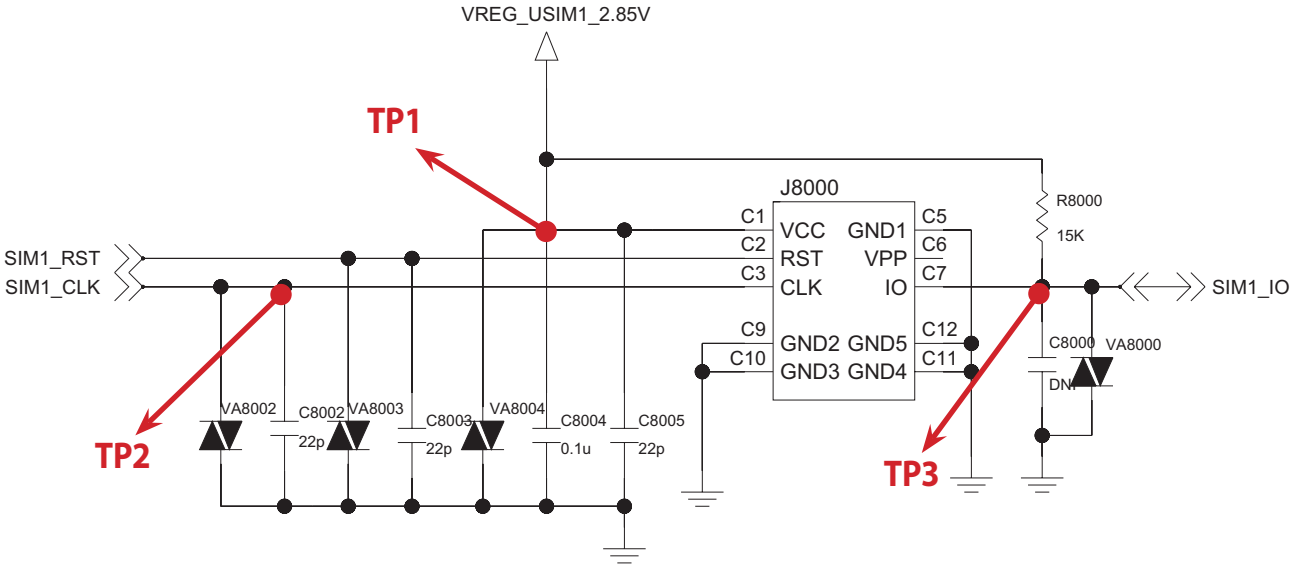


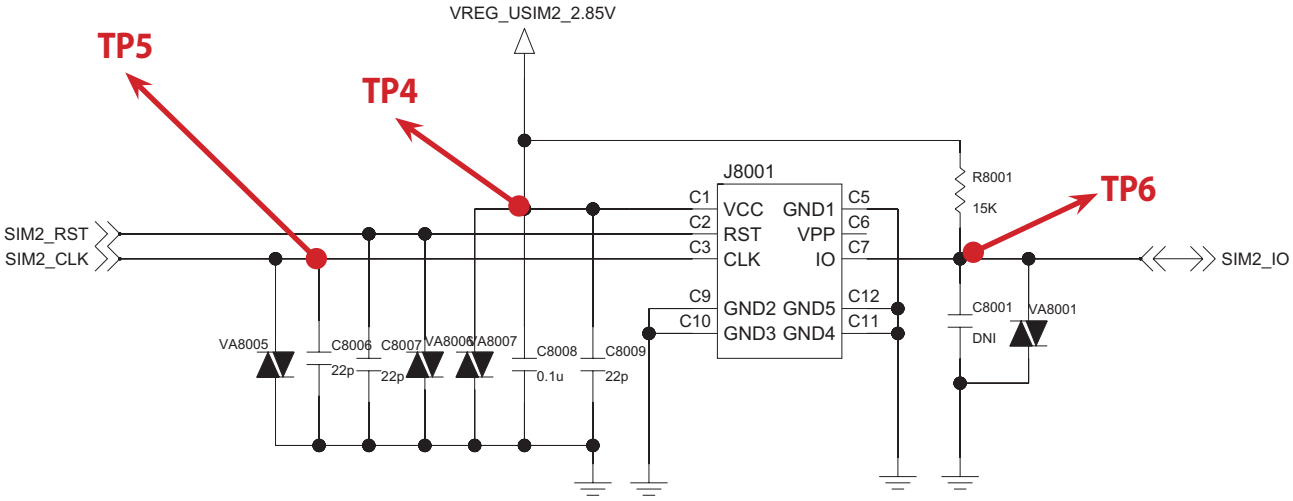
Measurement

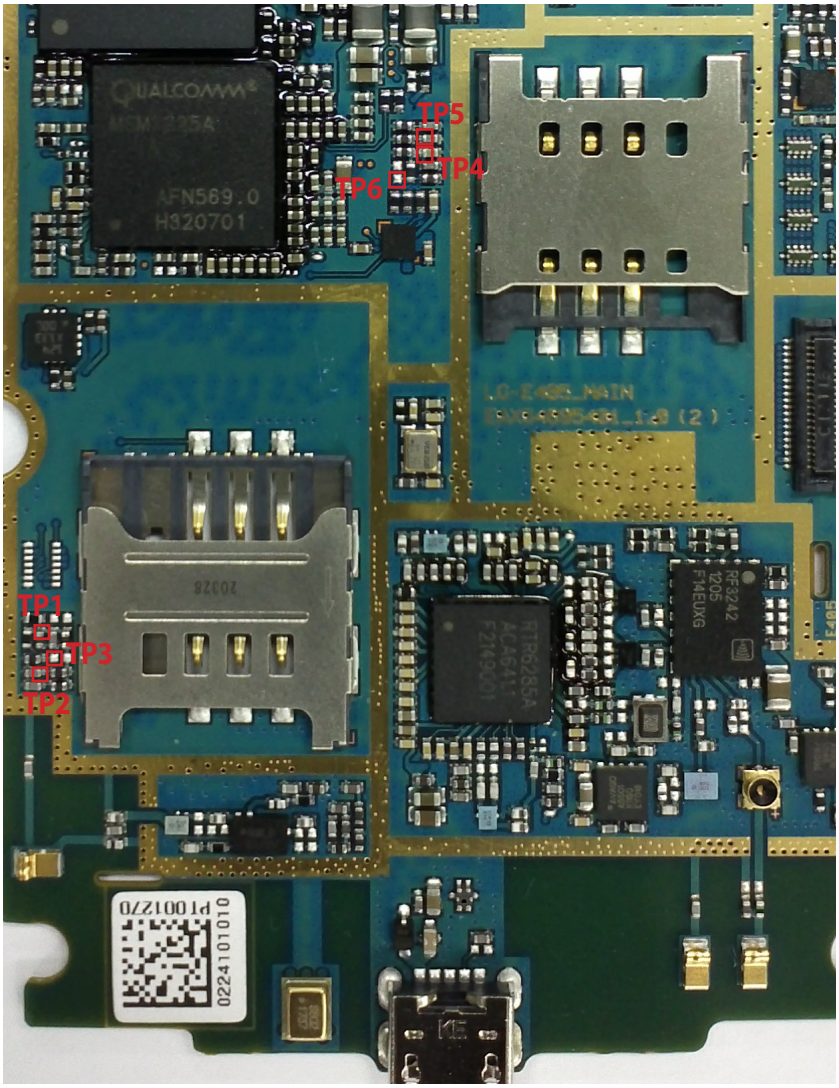
VREG_RUIM1_3.0V & VREG_RUIM2_3.0V

SIM1_RST & SIM2_RST

SIM1_IO & SIM2_IO





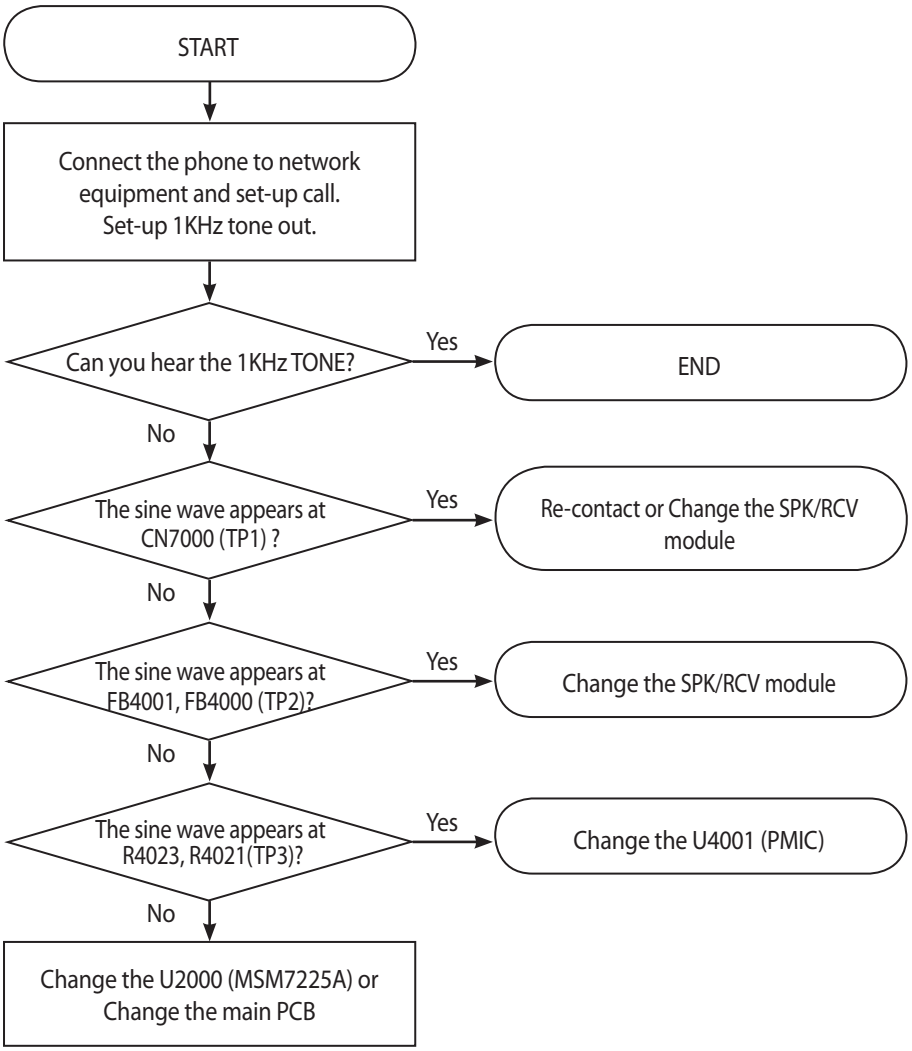


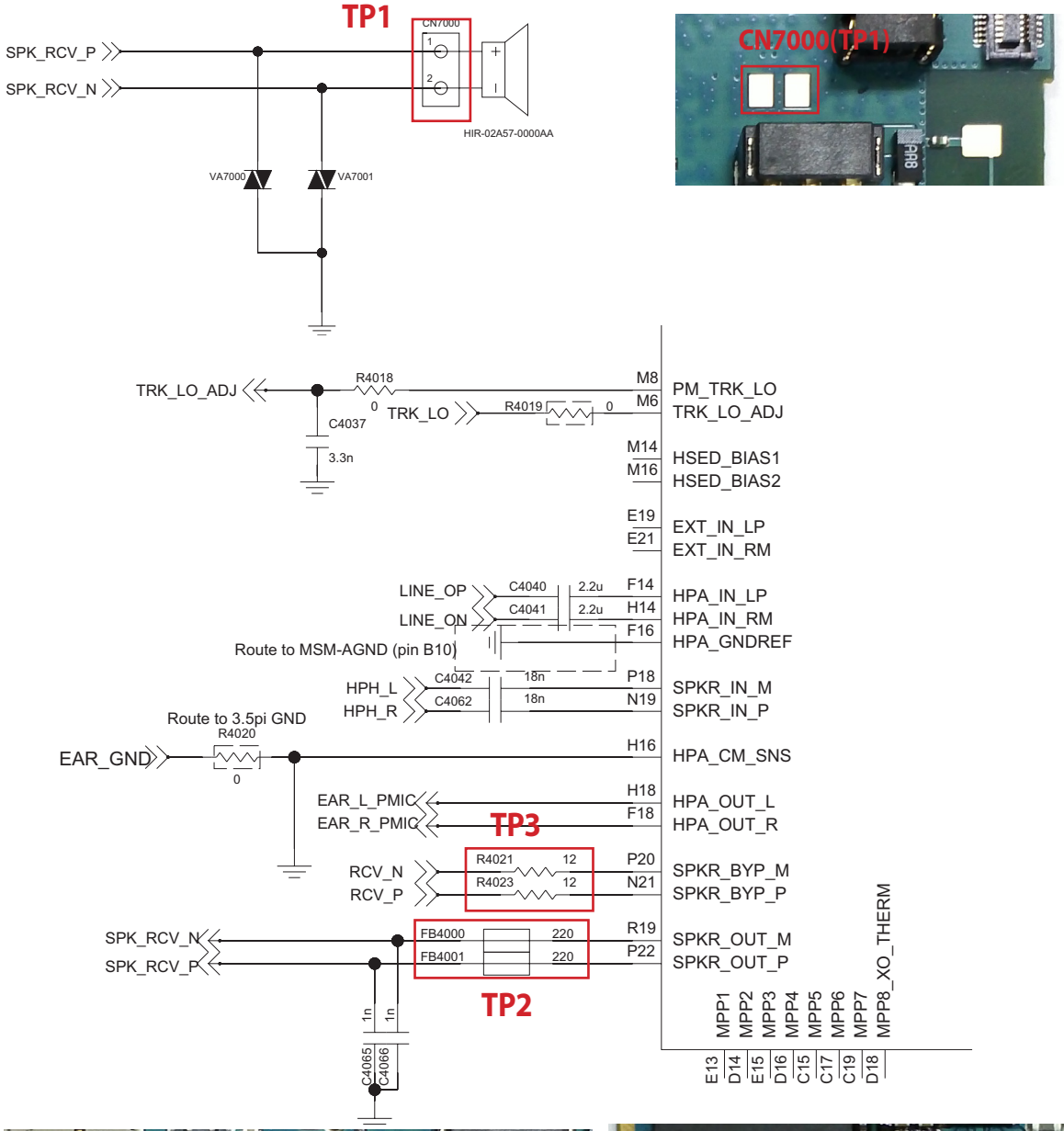
4.19 Audio Troble

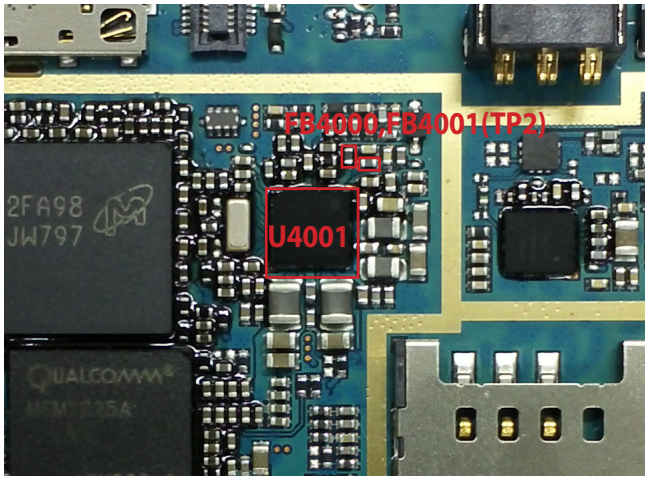
4.19.1 Receiver Path

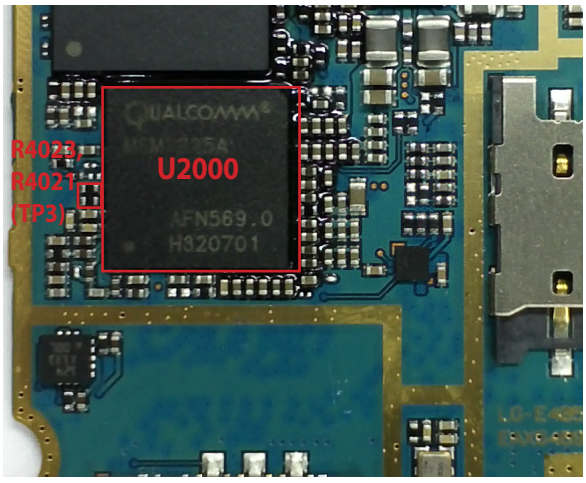
MSM7225A EAR1_OP, EAR1_ON -> RCV_P, RCV_N -> R4023, R4021 (TP3) ->

U4001 (PM8029 : PMIC) -> FB4001, FB4000 (TP2) -> CN7000 (TP1) (SPK Pad)





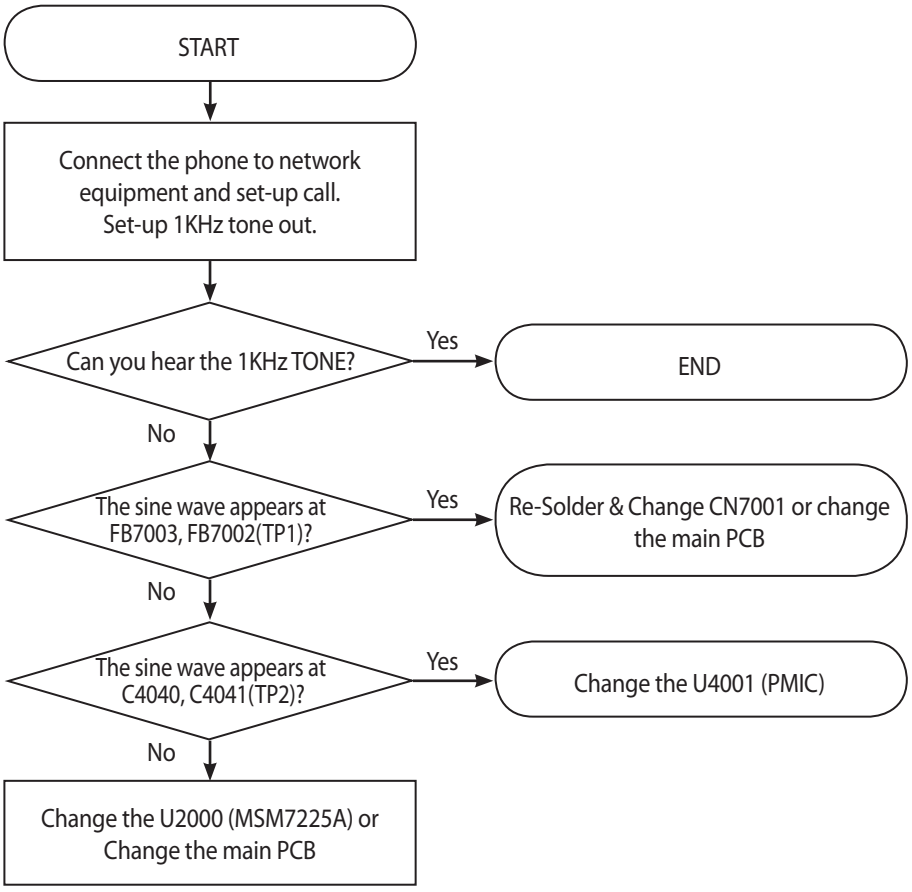


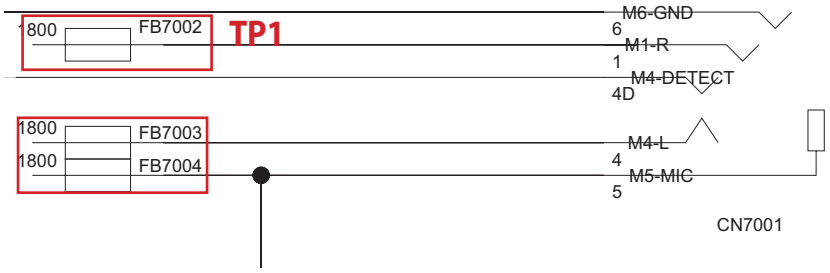


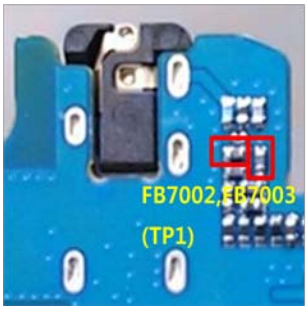
4.19.2 Headset path

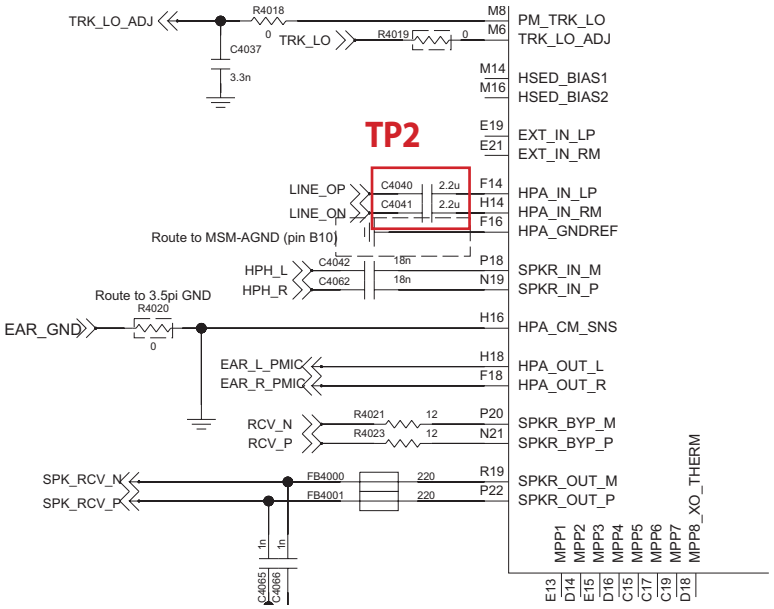
MSM7225A LINE_OP, LINE_ON -> C4040, C4041(TP2) -> U4001 (PM8029 : PMIC) ->

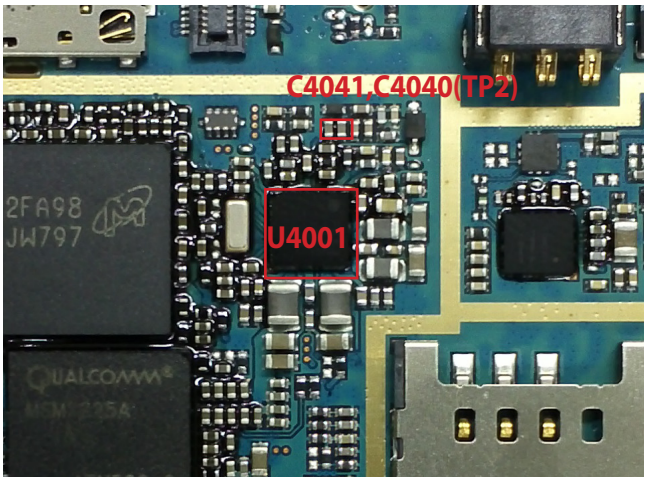
R7001, R7000 -> FB7003, FB7002(TP1) -> CN7001 (3.5pi Ear-jack)







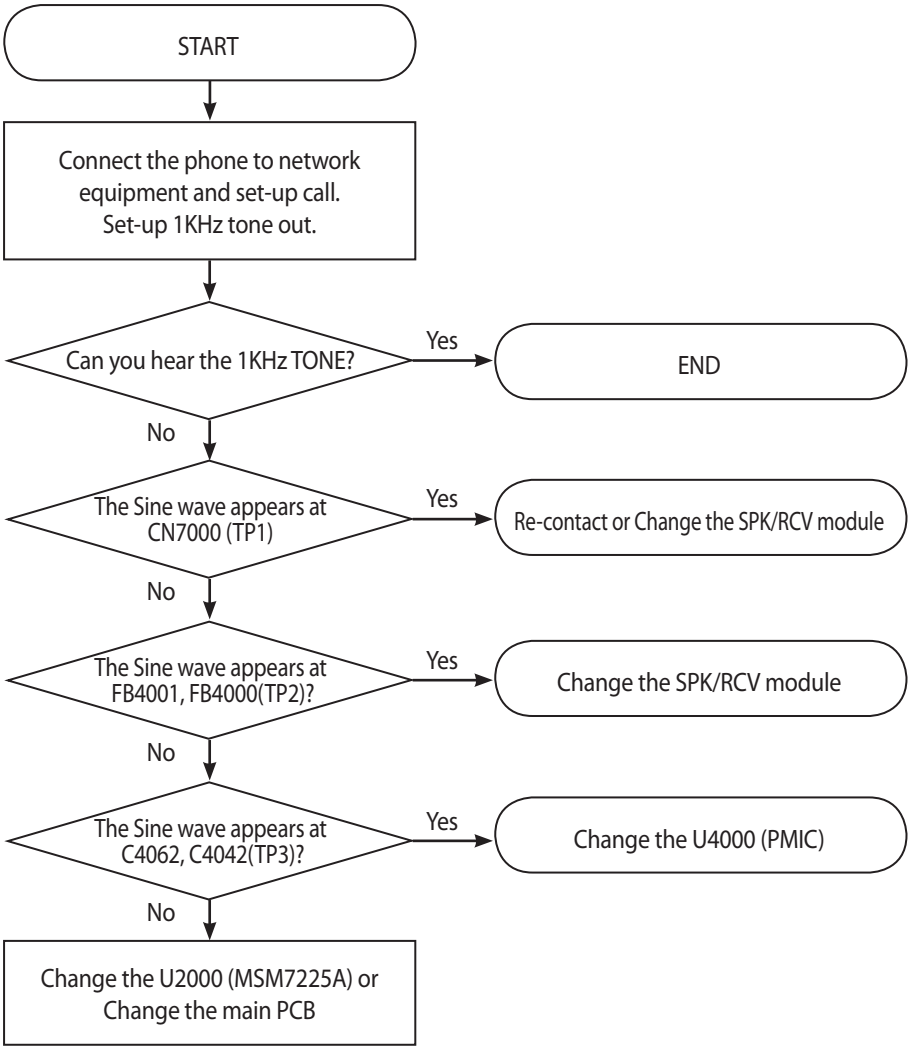


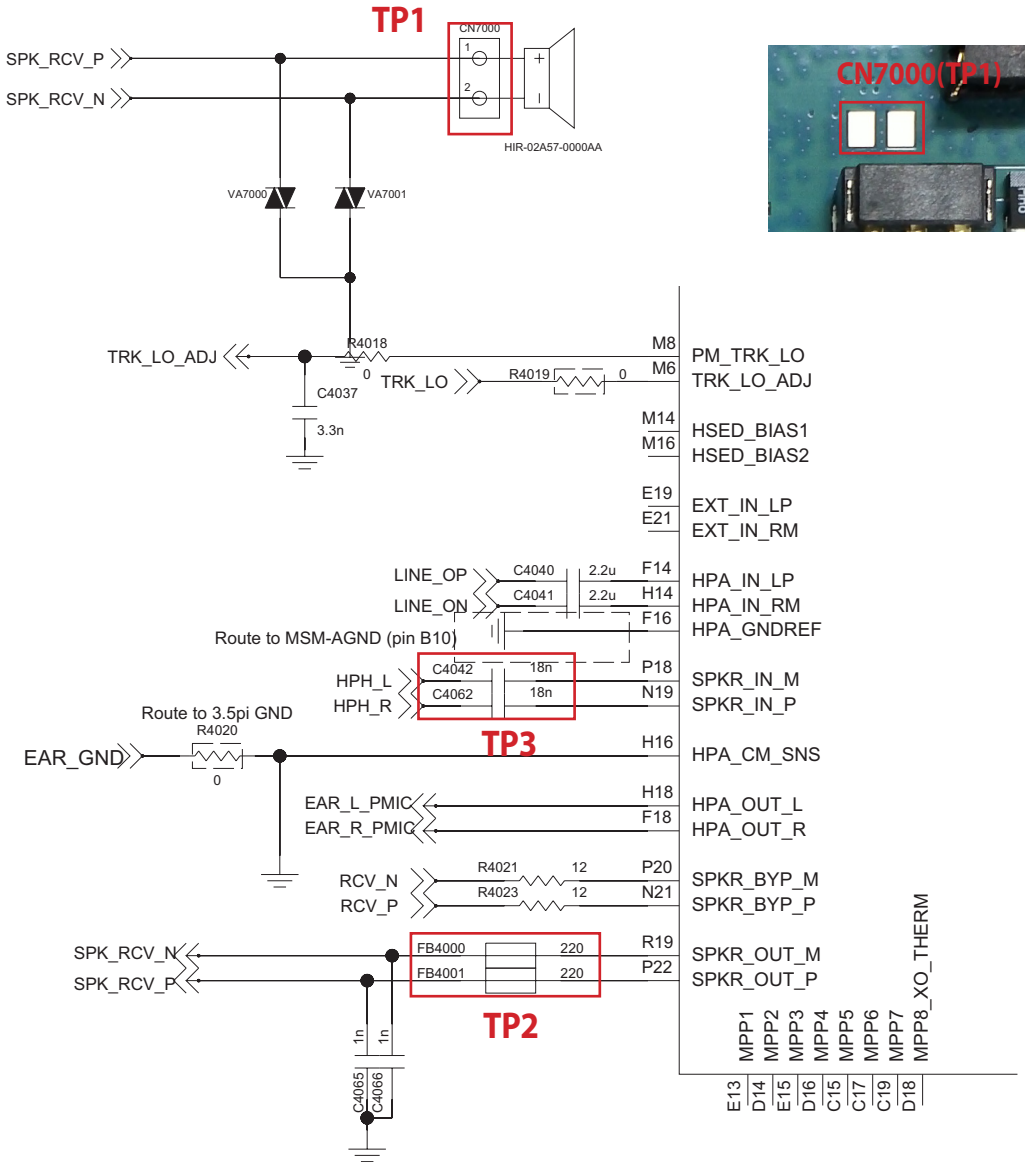


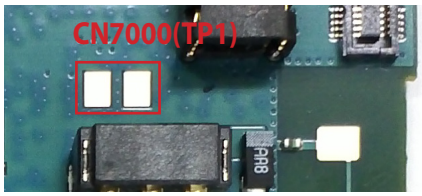
4.19.3 Speaker/Speaker Phone path

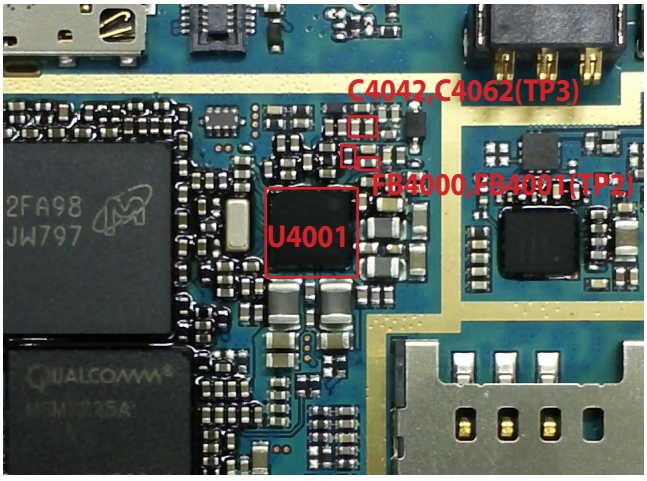
MSM7225A HPH_R, HPH_L -> C4062, C4042(TP3) -> U4001 (PM8029 : PMIC)

-> FB4001, FB4000 (TP2) -> CN7000 (TP1) (SPK Pad)





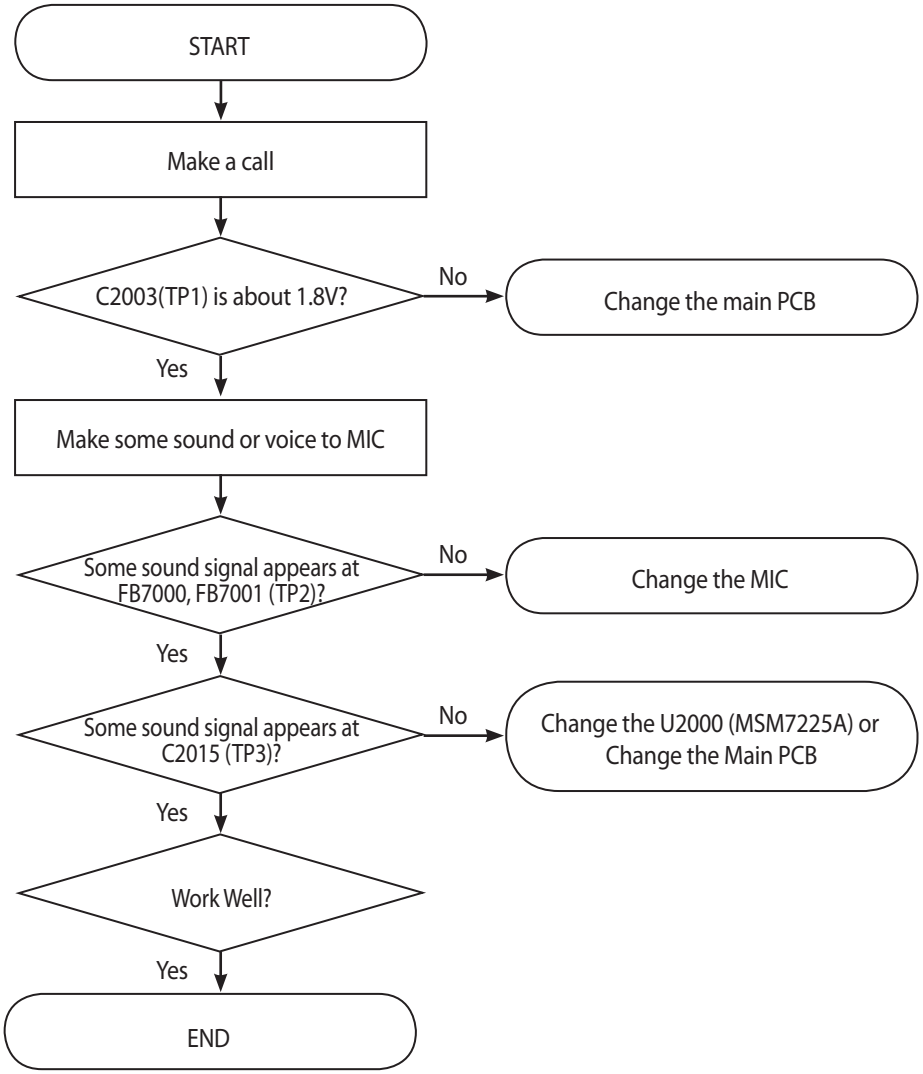


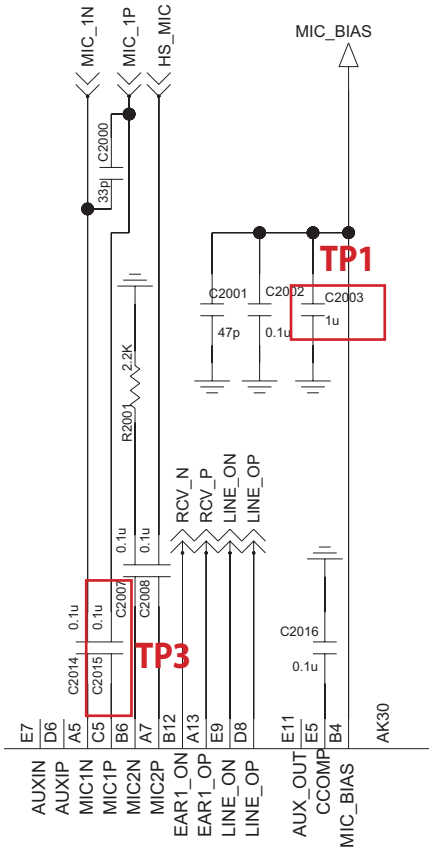


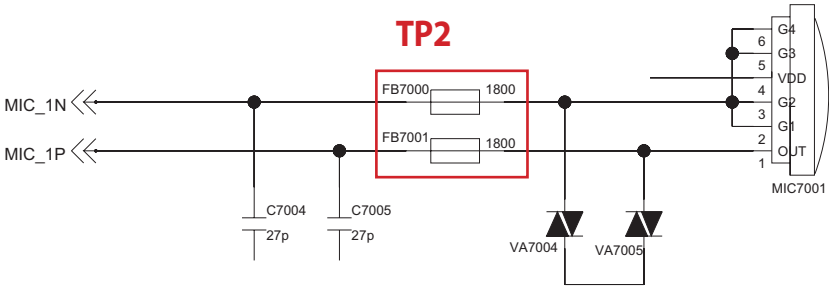
4.19.4 Main Microphone

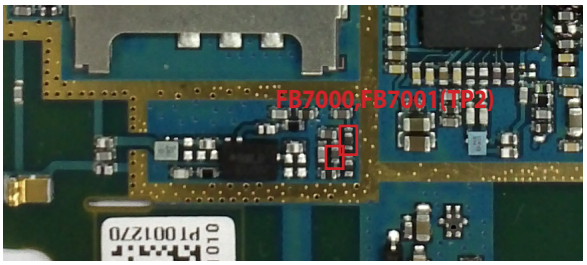
MIC Signal: MIC7001 -> FB7001, FB7000 (TP2) -> C2015 (TP3) MIC_1P of MSM7225A

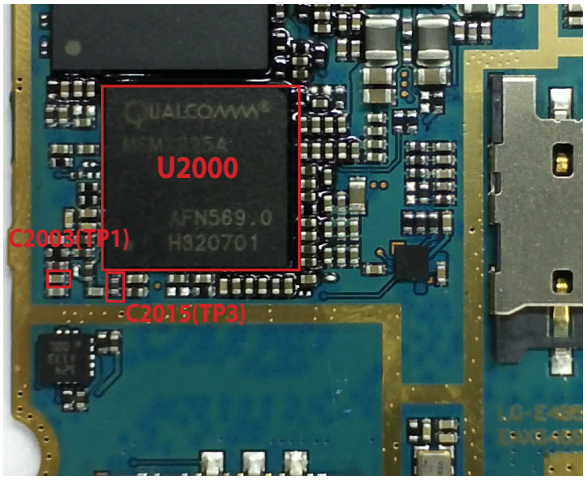
MIC Bias: MIC_BIAS-> C2003 (TP1)-> MIC7001









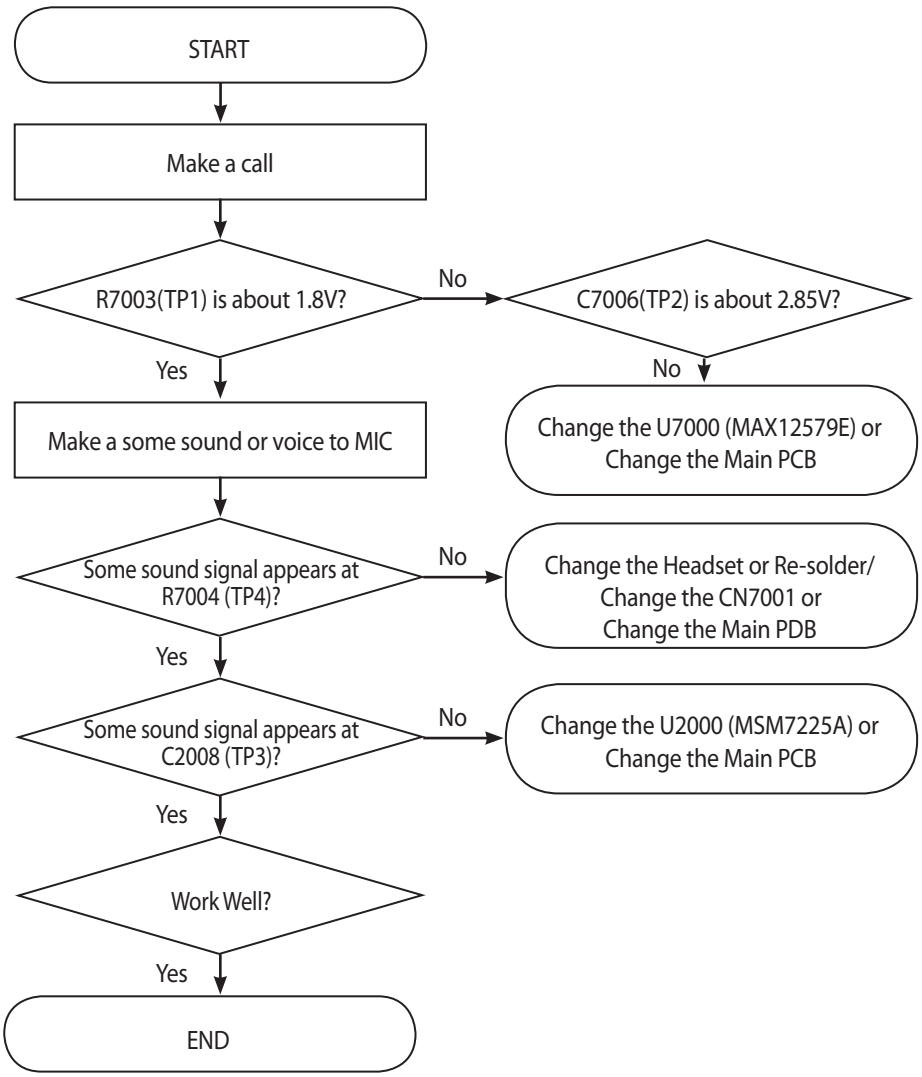


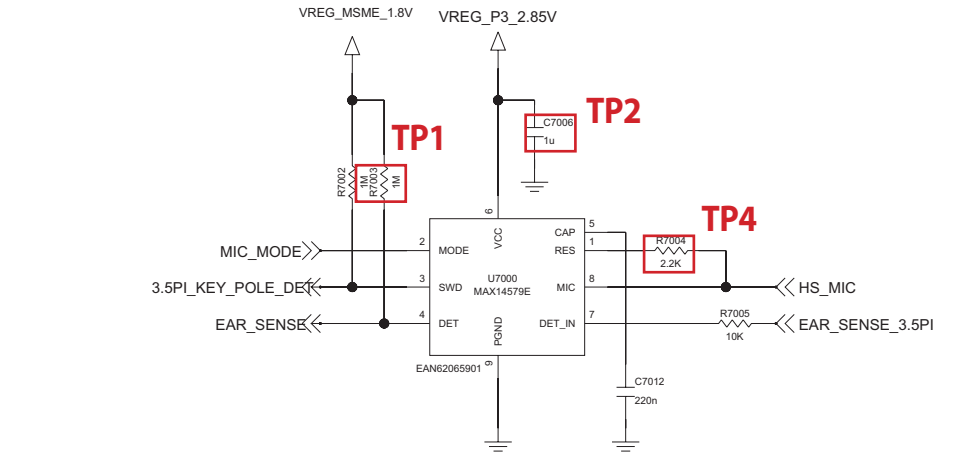
4.19.5 Headset micr ophone

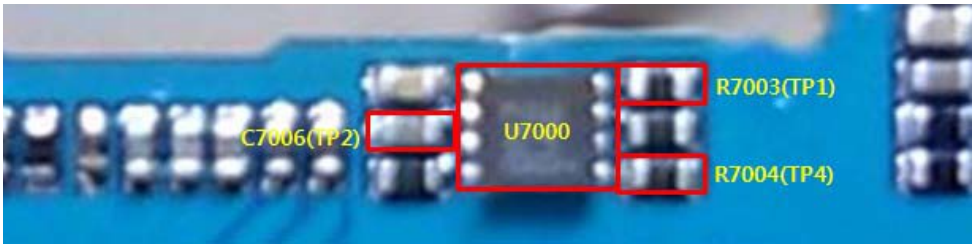
- MIC Signal : 3.5 pi Headset (CN7001) -> FB7004 -> R7004 (TP4) MIC of MAX14579E & C2008 (TP3) MIC2P of MSM7225A

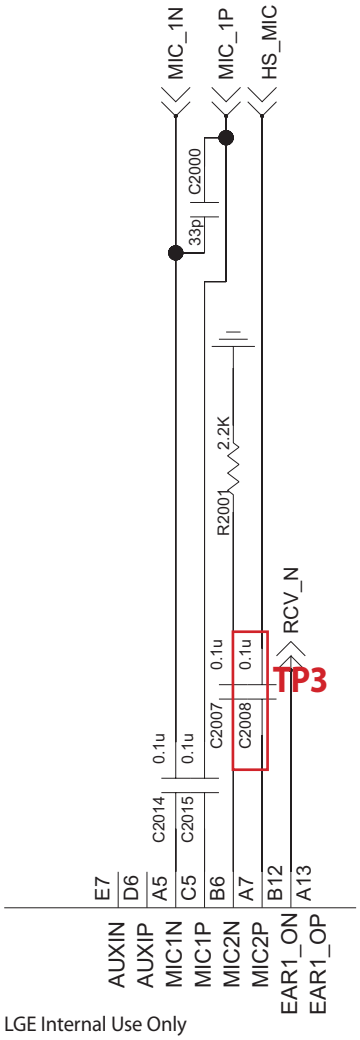
- MIC Bias : VREG_MSME_1.8V -> R7003 (TP1) DET -> R7005 DET_IN -> Headset MIC

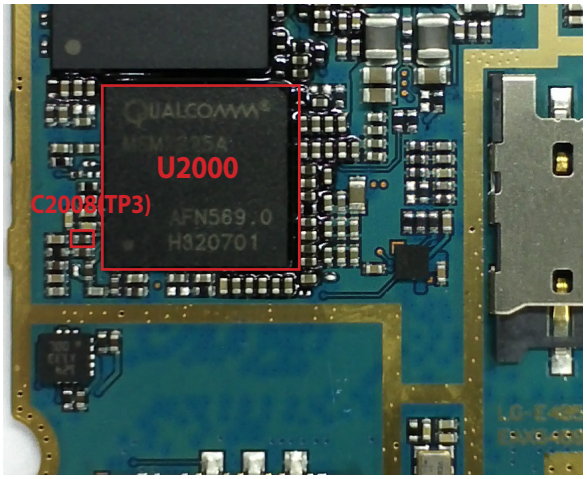
- HS Detect IC Bias: VREG_P3_2.85V-> C7006 (TP2)





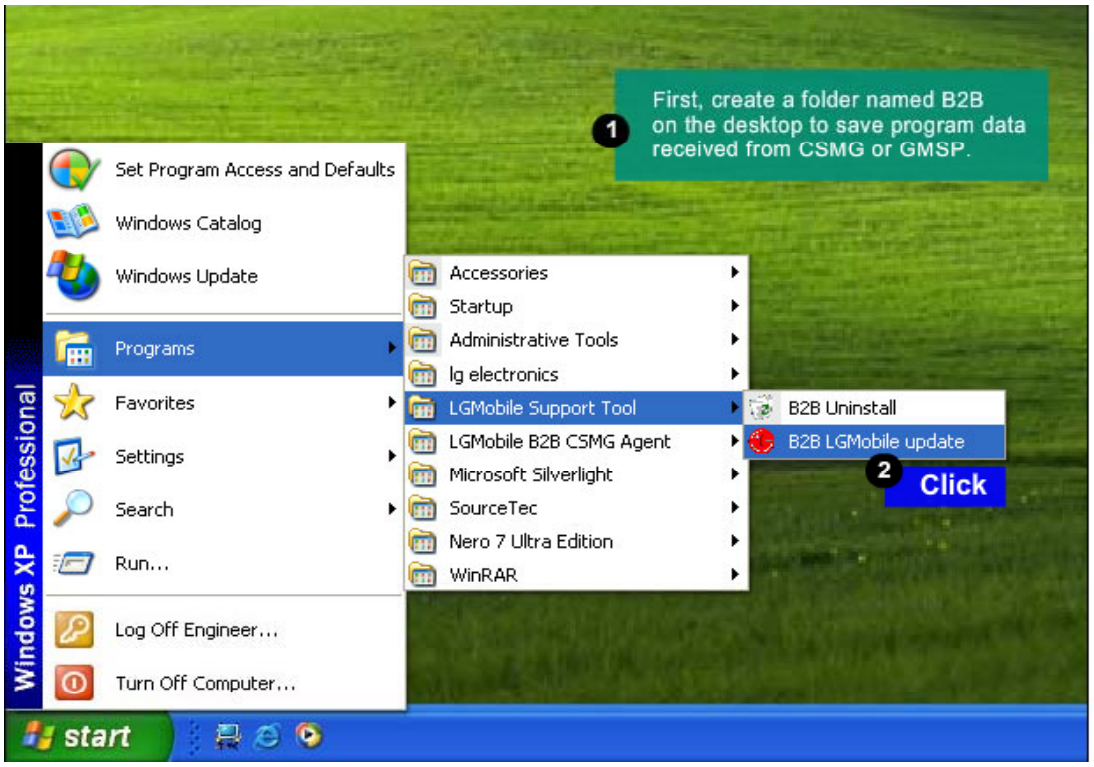


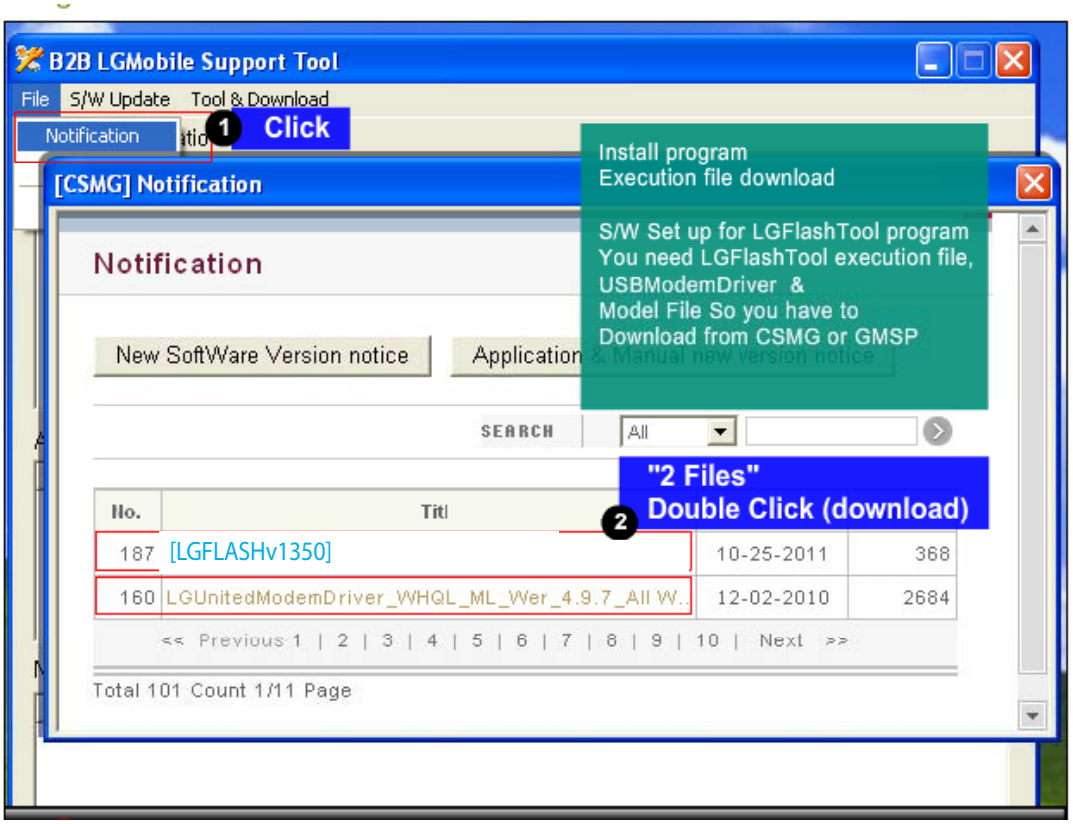


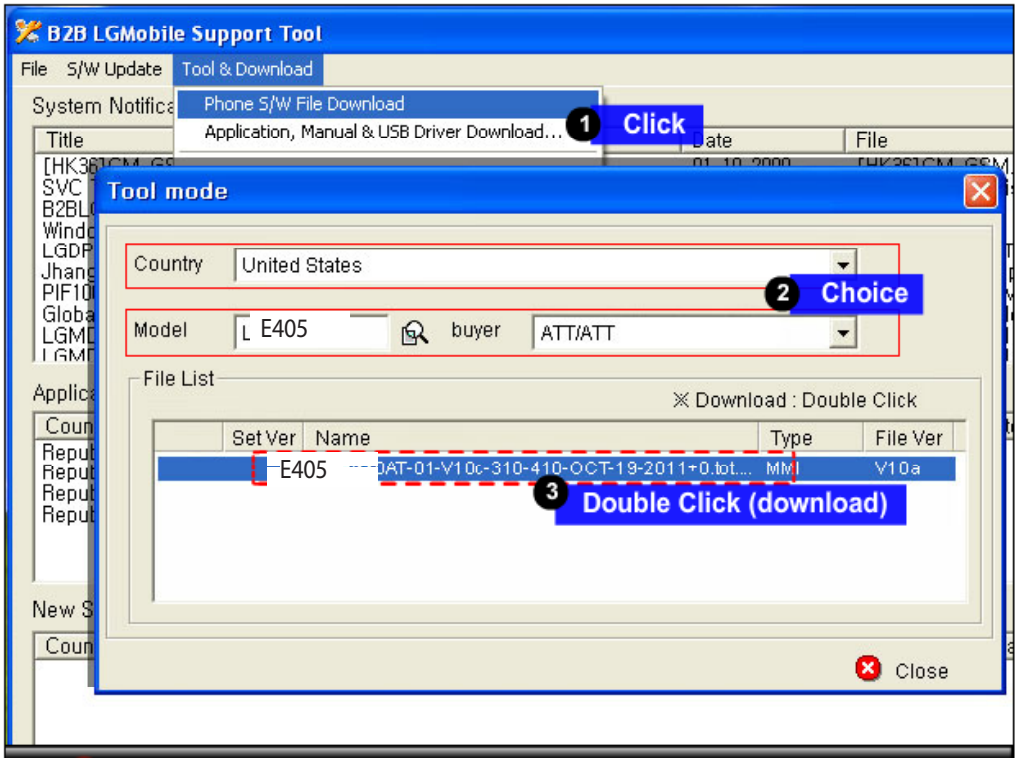


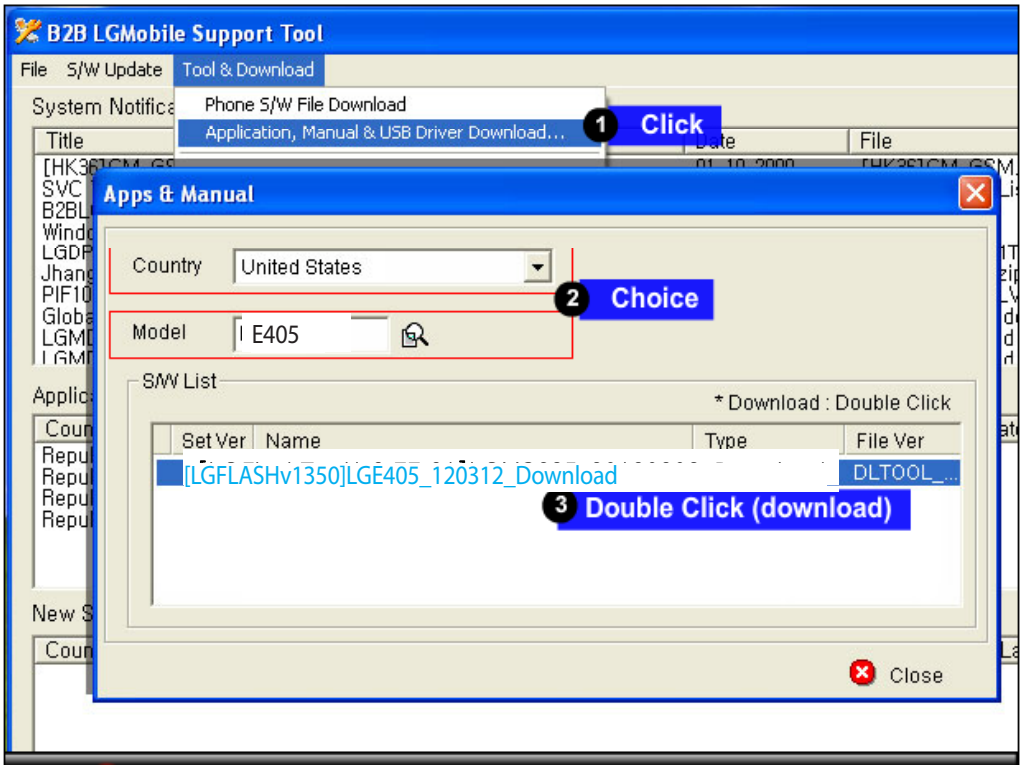
5. DOWNLOAD

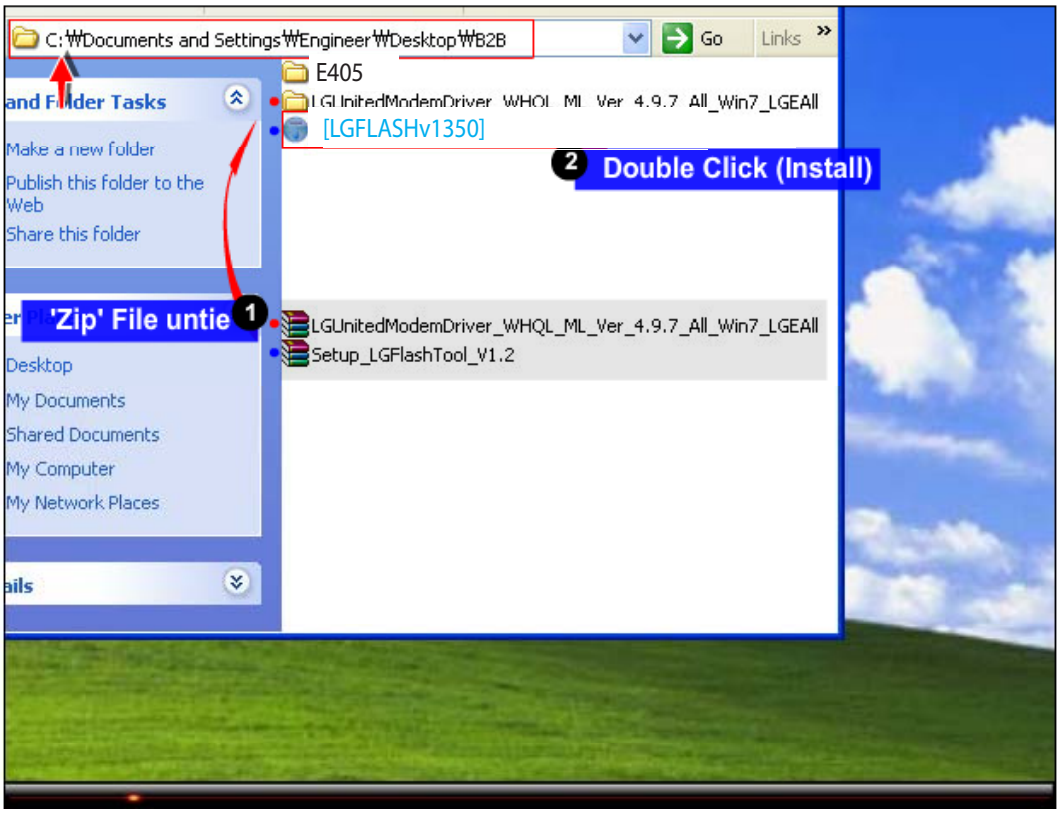
TOOL INFORMATION		
TOOL VERSION	**DLL NAME**	**USB DRIVER**
[LGFLASHv1350]	[LGFLASHv1350]LGE405_120312_Download	LG United Mobile Driver Version 3.6 Package Release 2011.11.01
Please Check the Version to "B2B"		
H/W		
	Name	**Part No.**
D/L Cable	Micro 5P (56-open-910K) USB DLC	RAD32167835

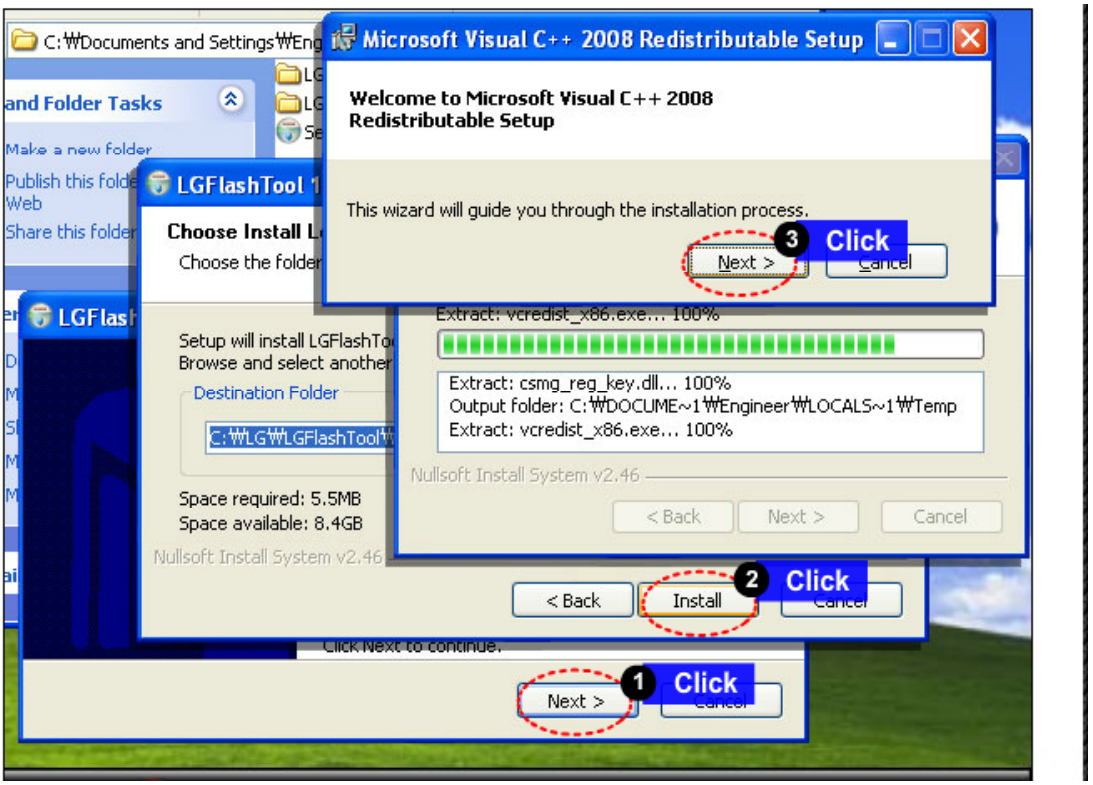


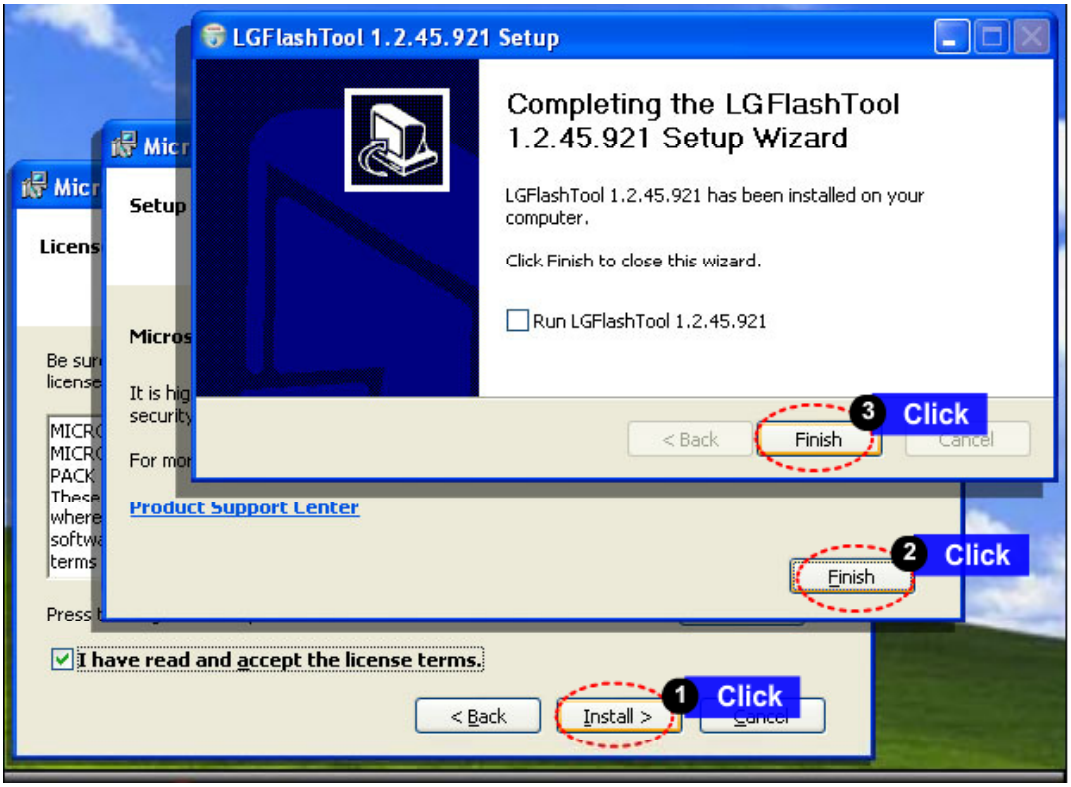


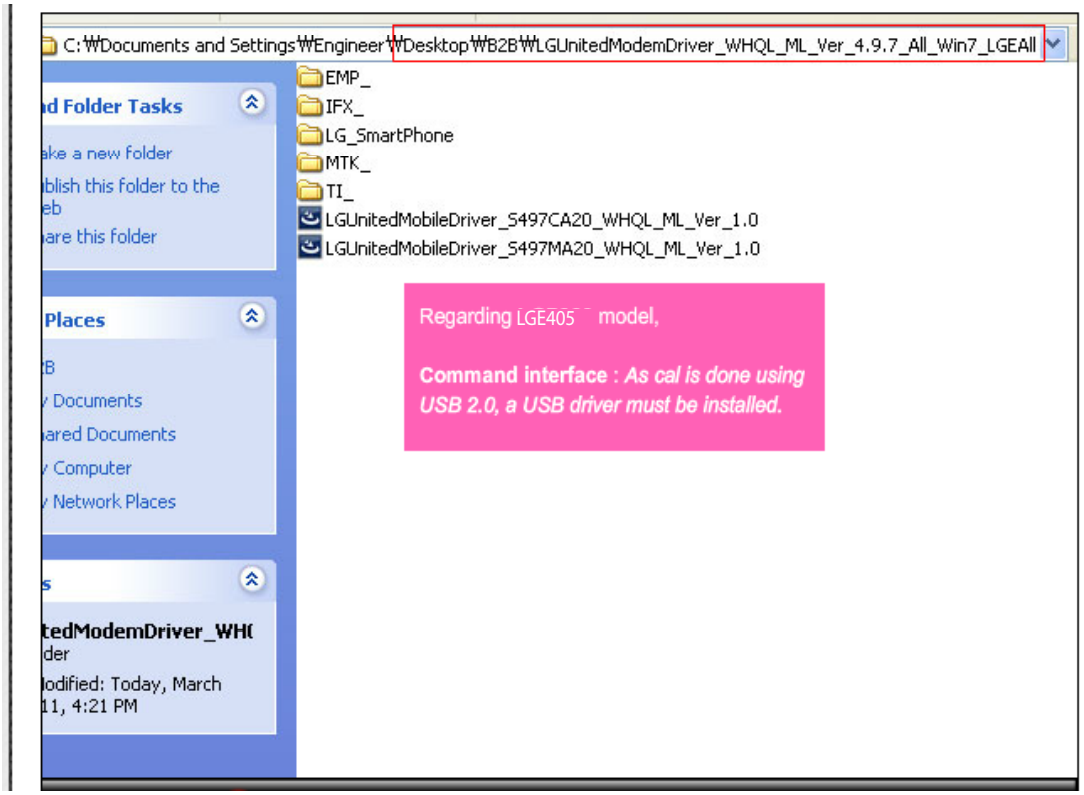


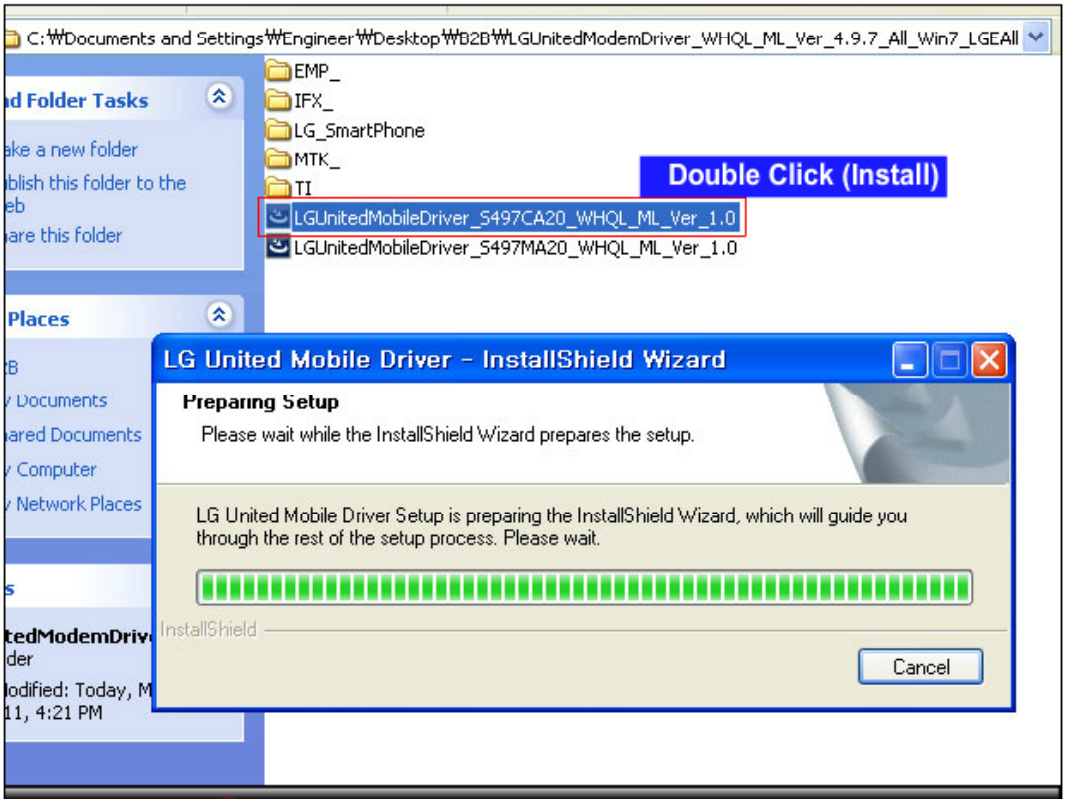


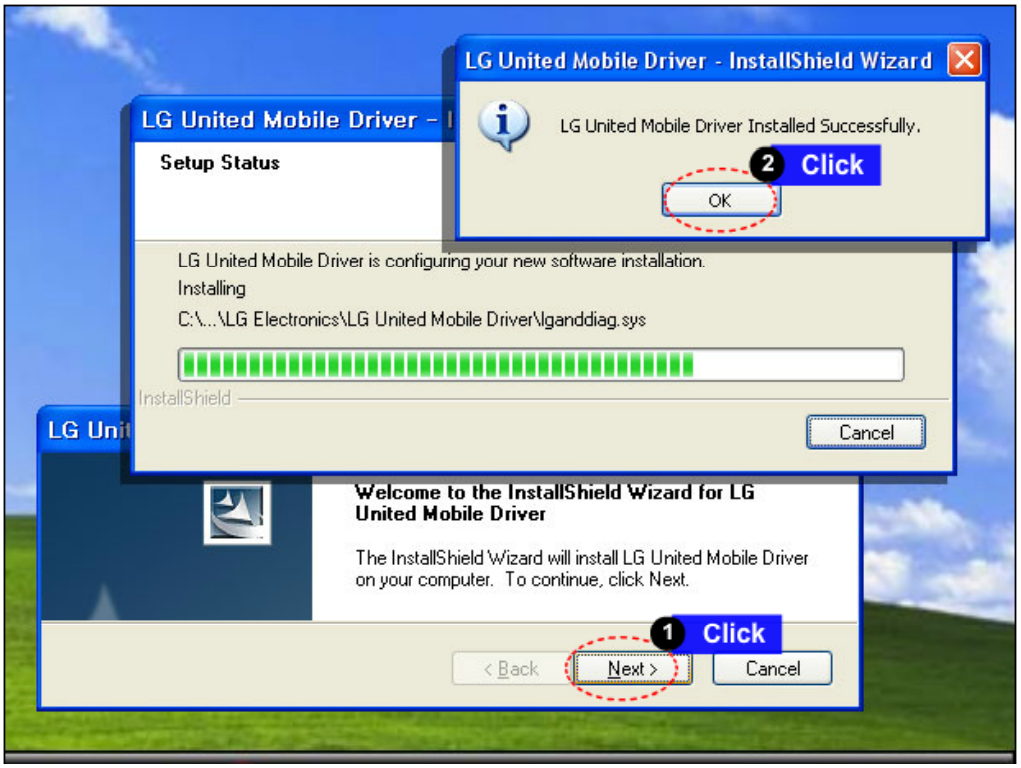


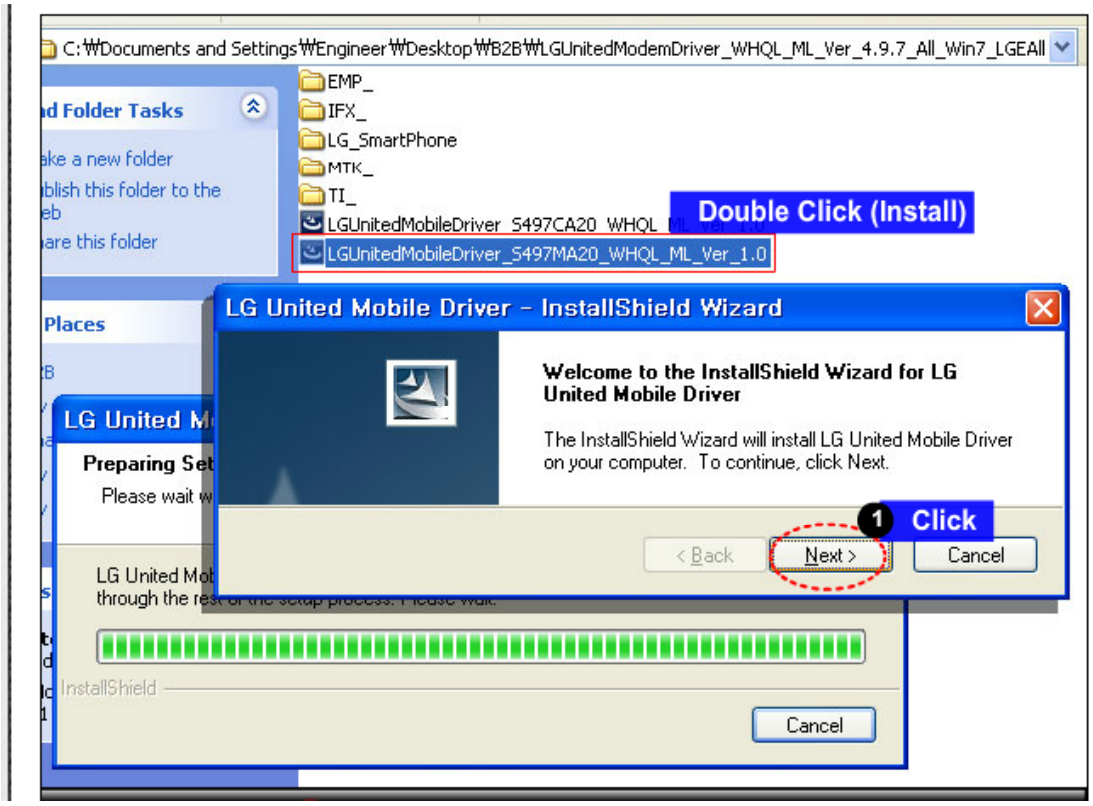


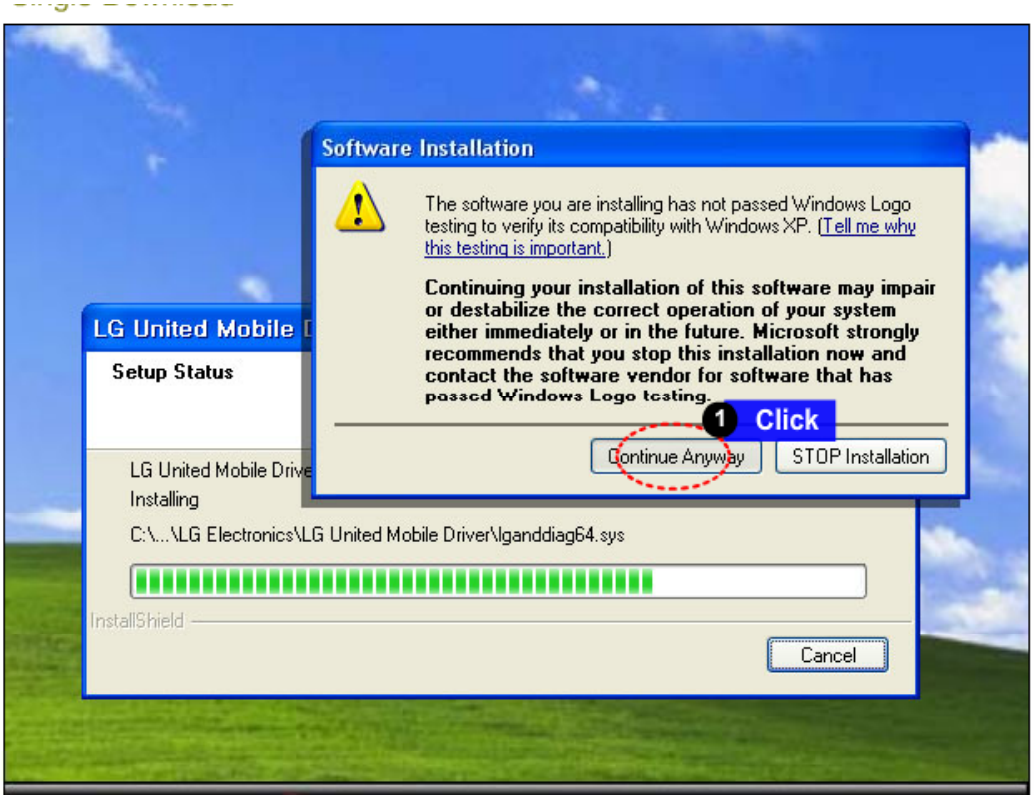


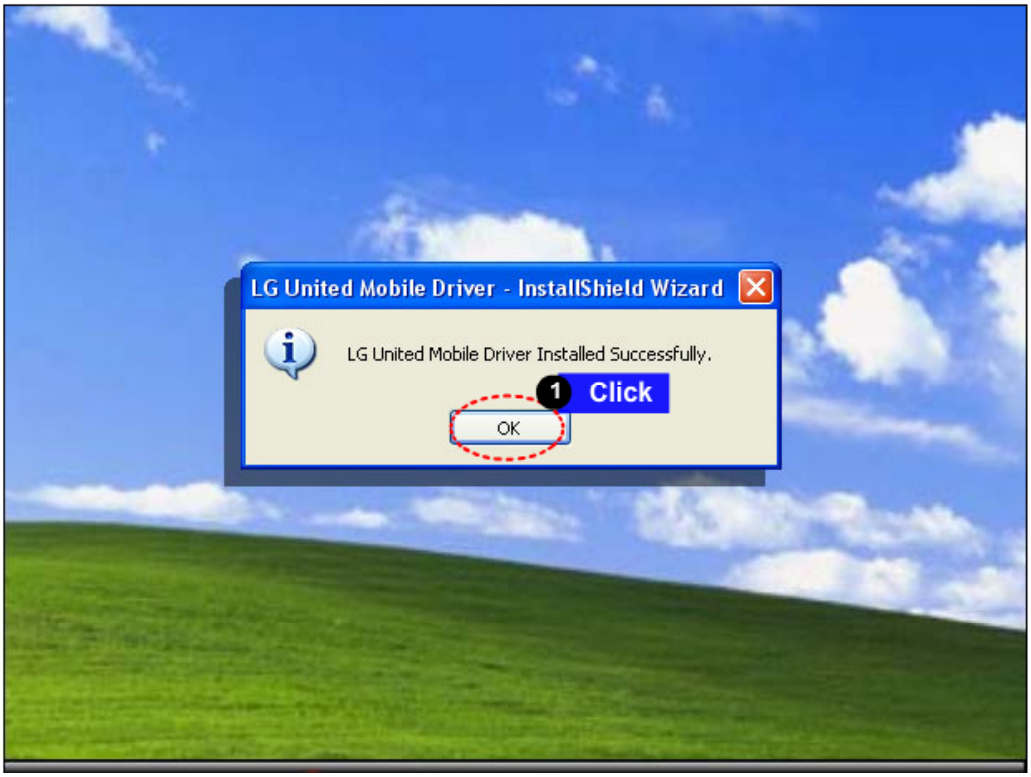


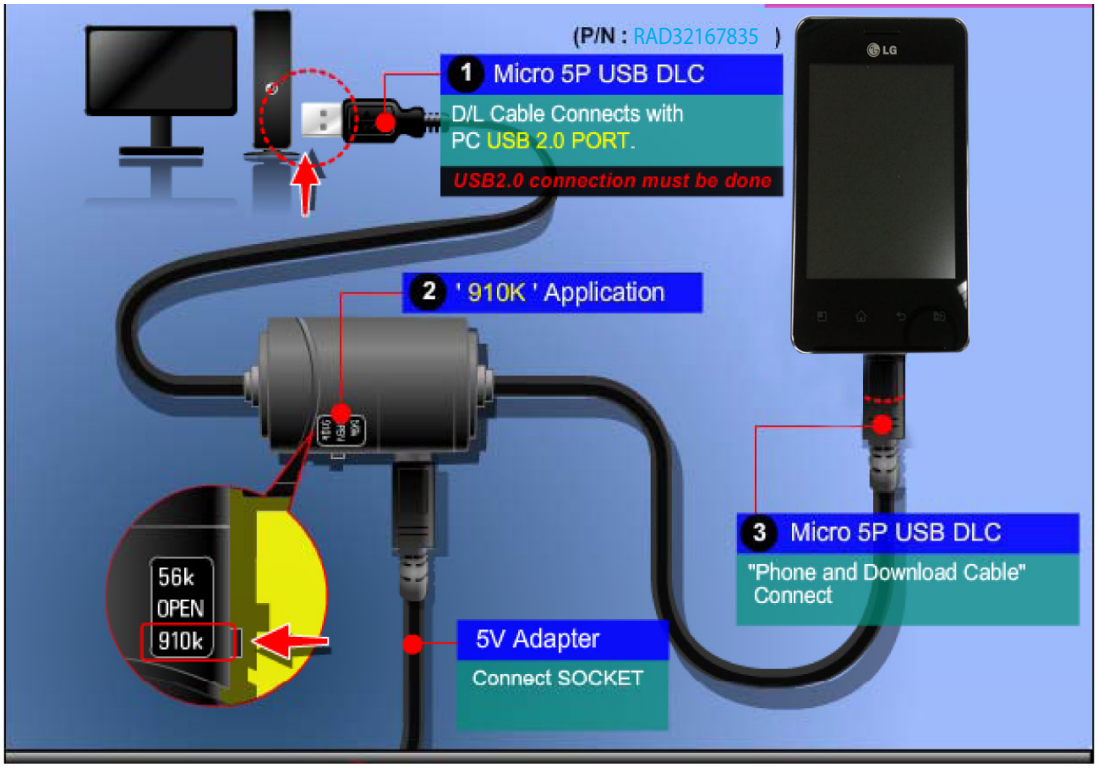


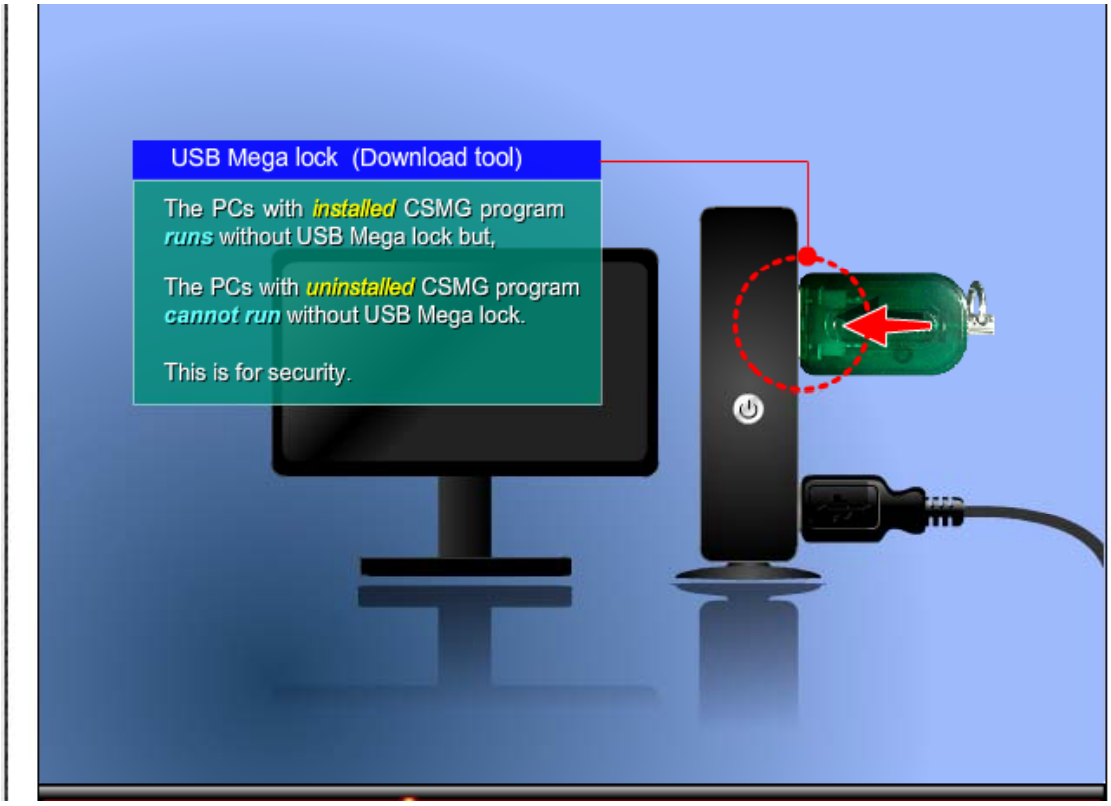


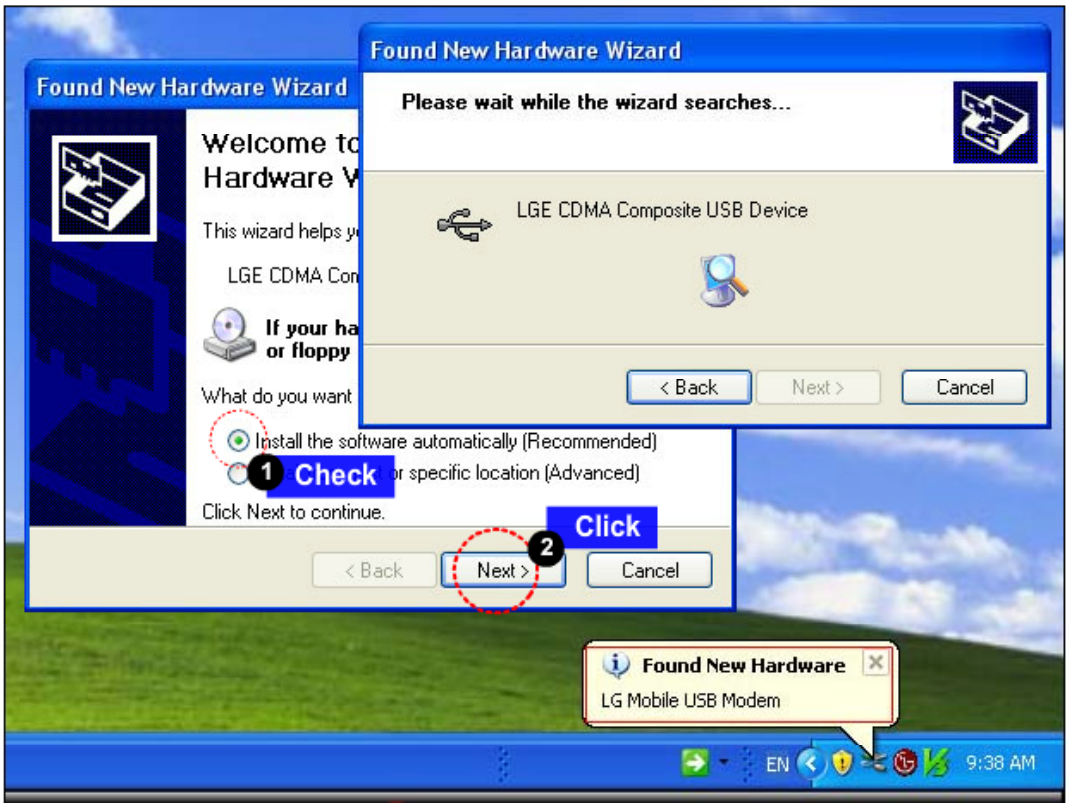


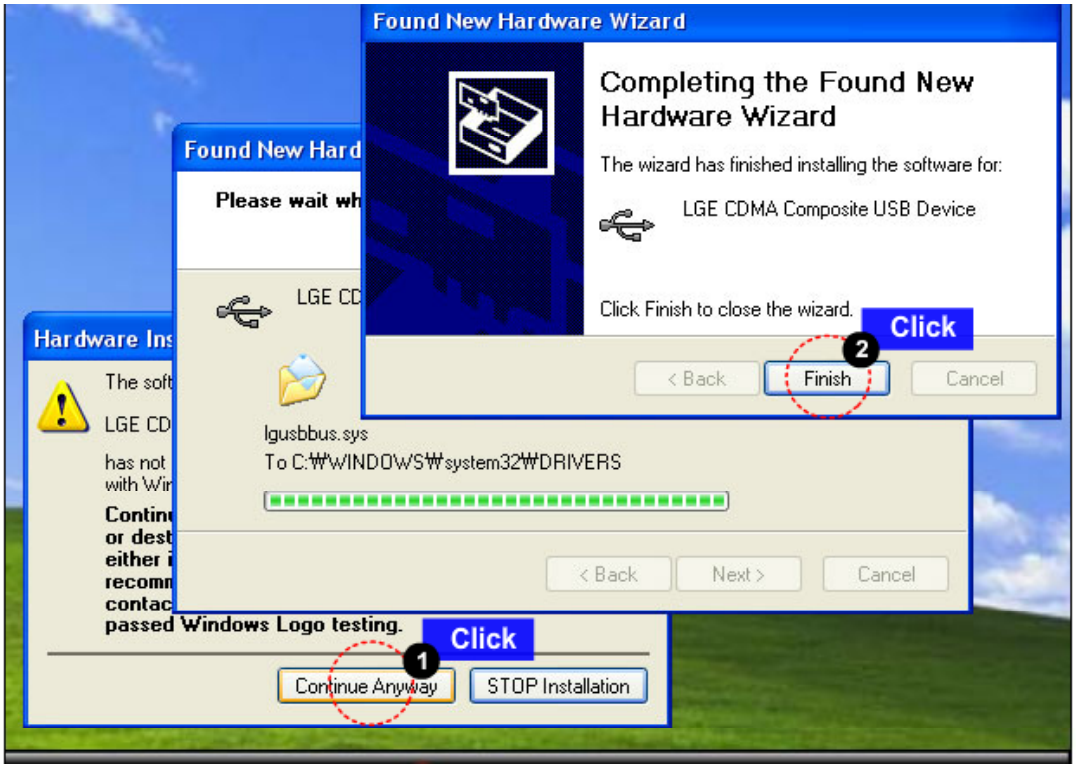


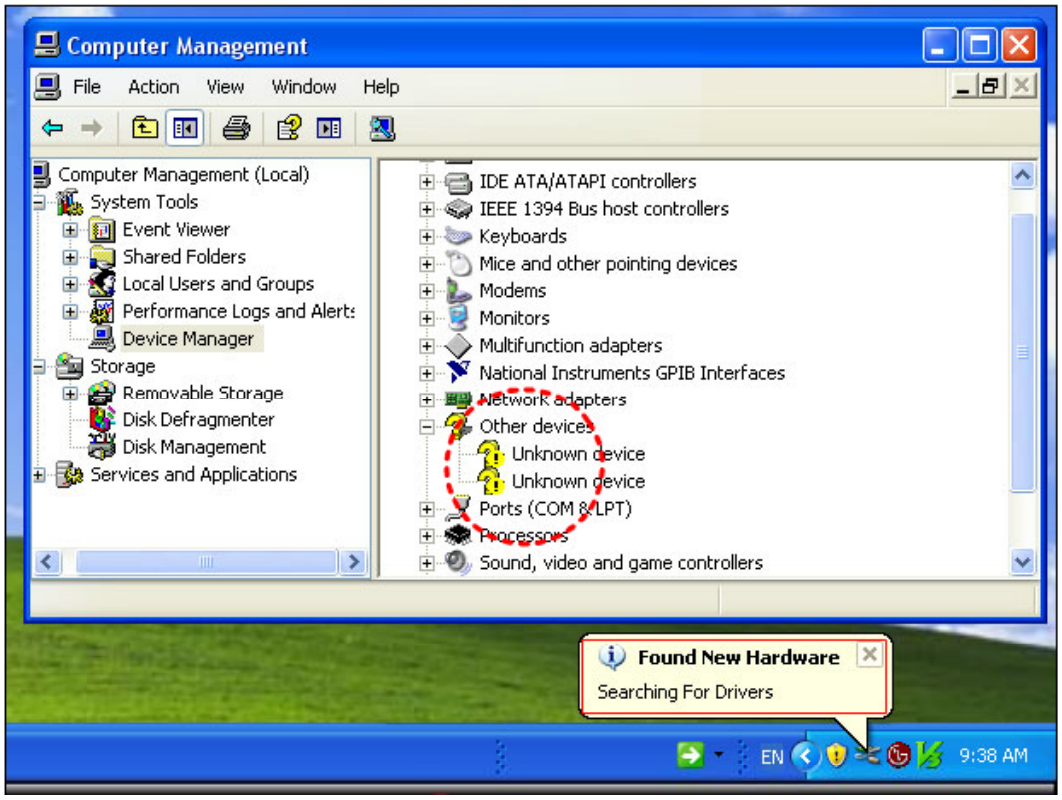


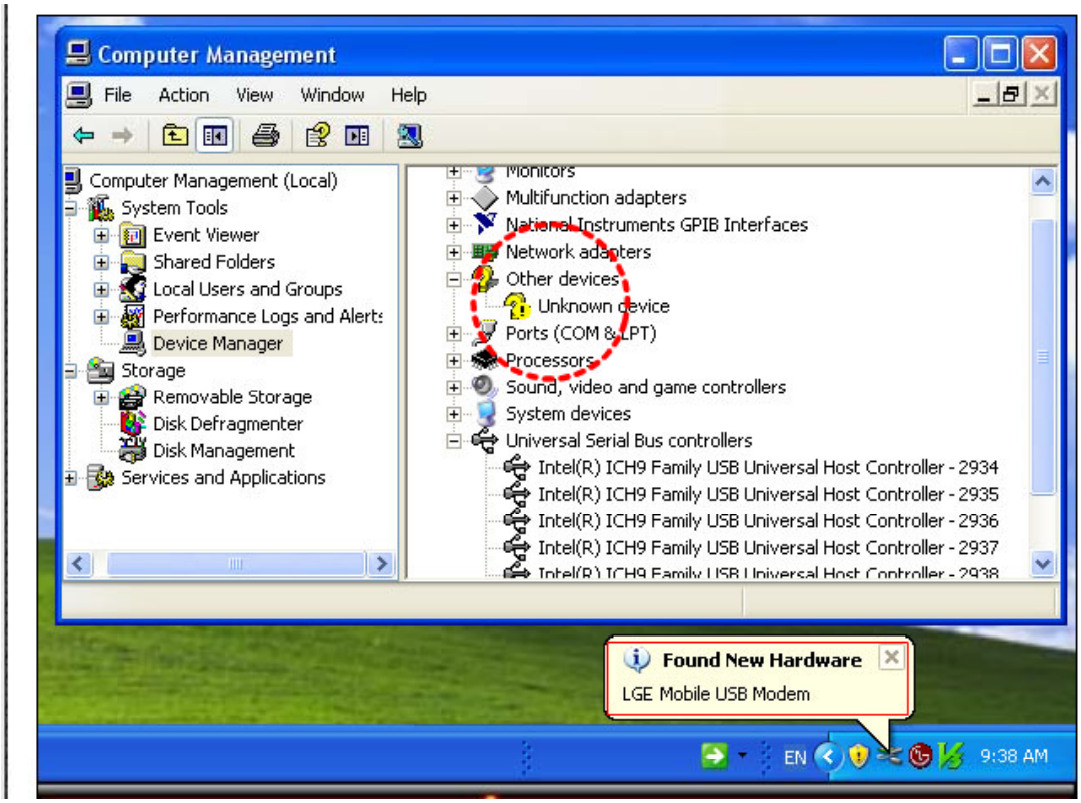


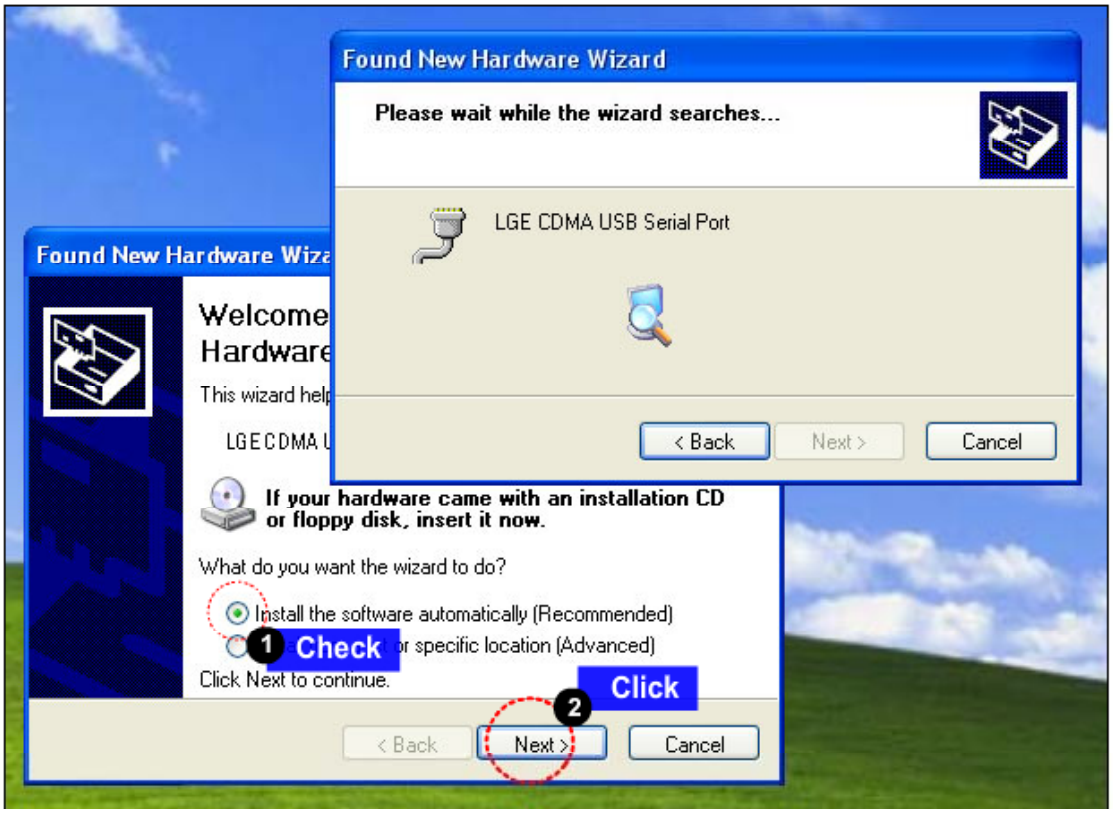


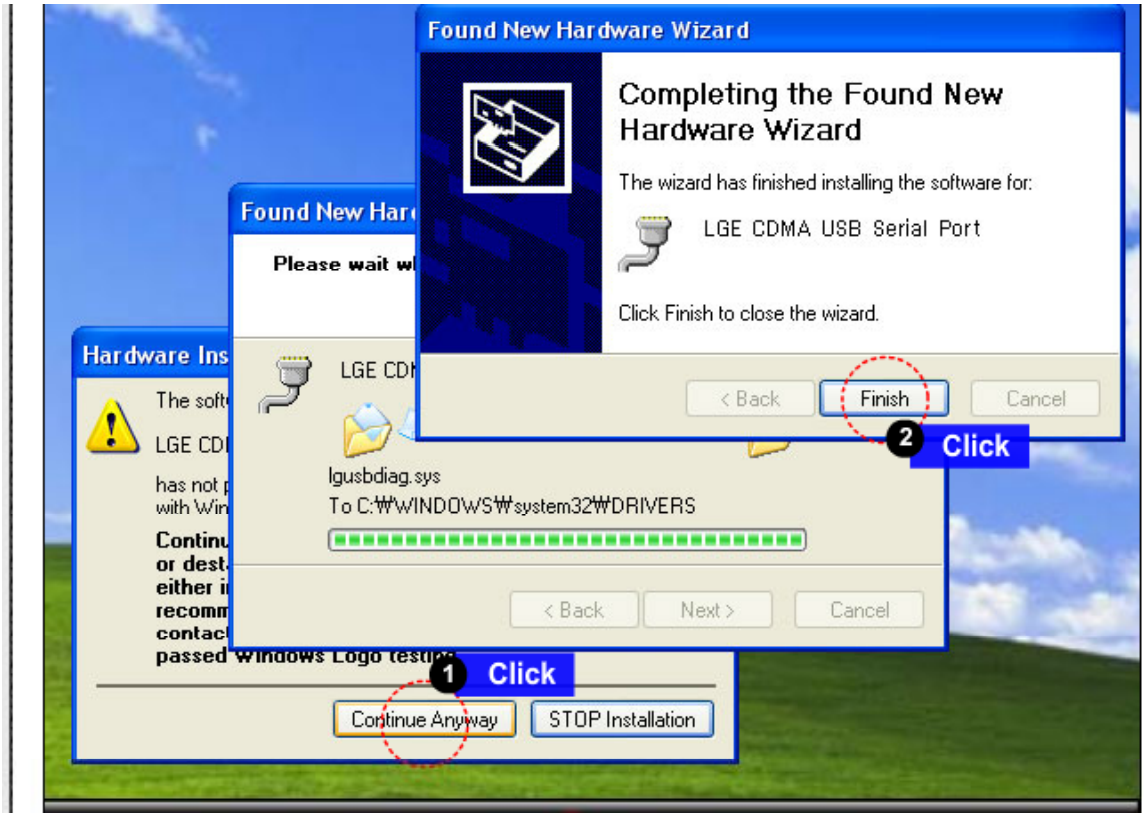


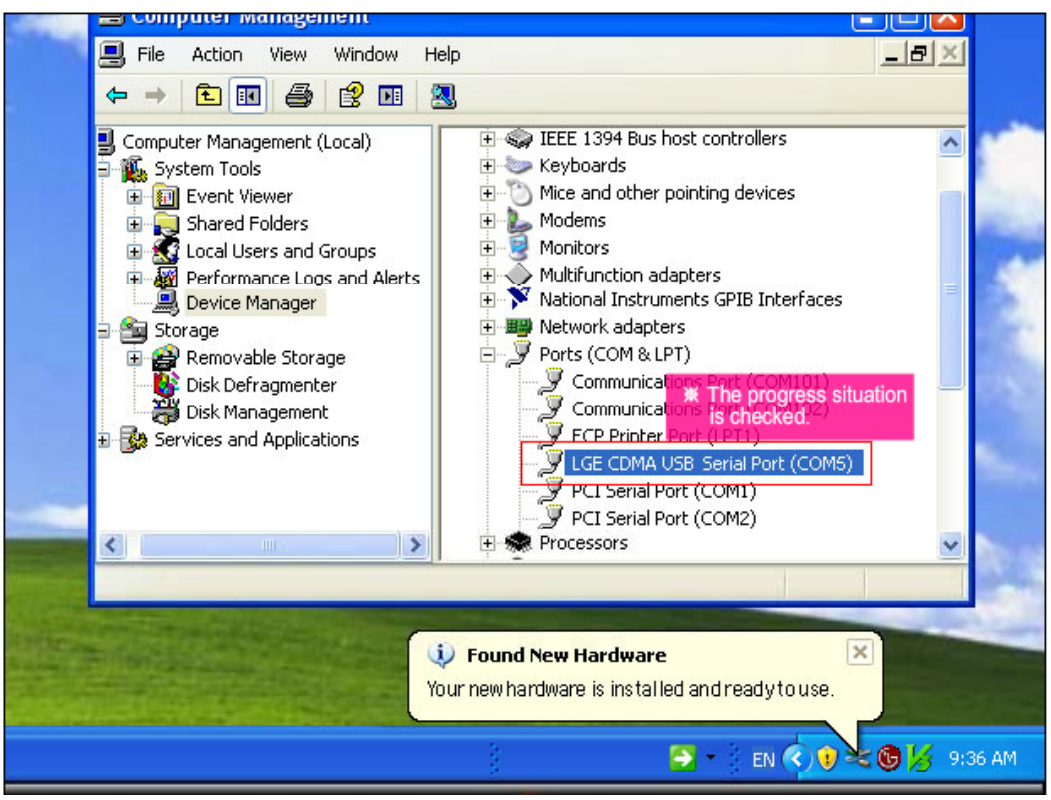


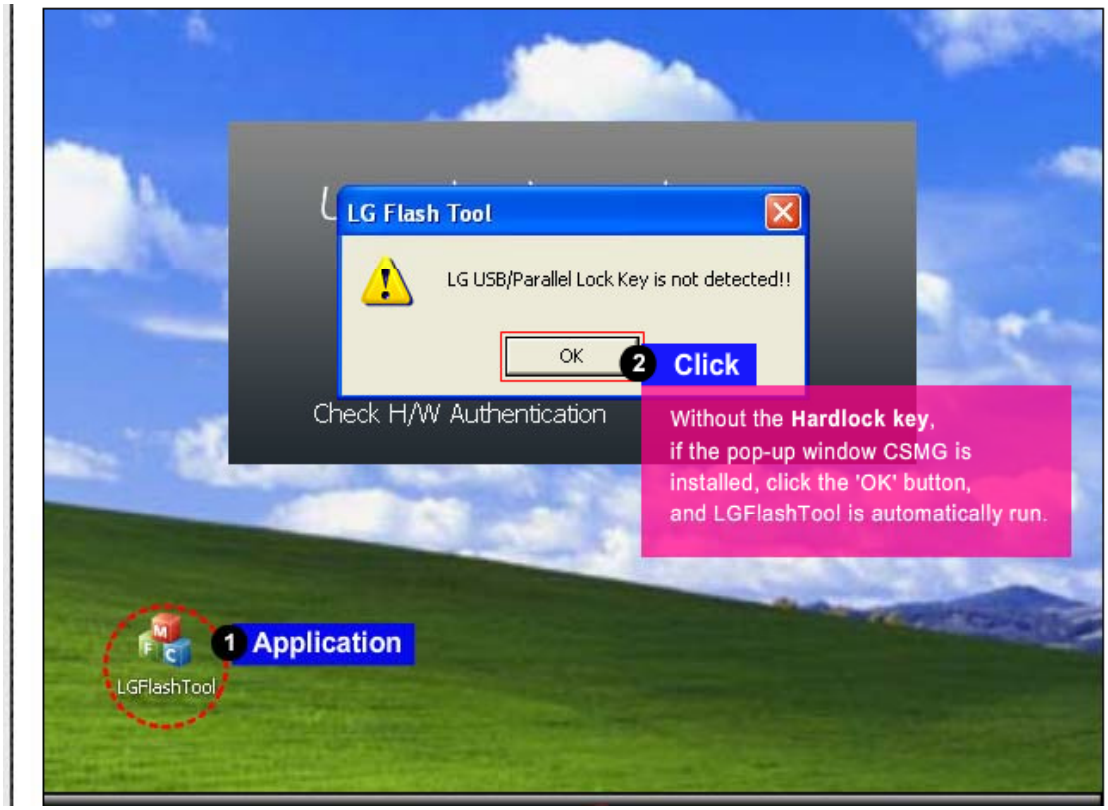


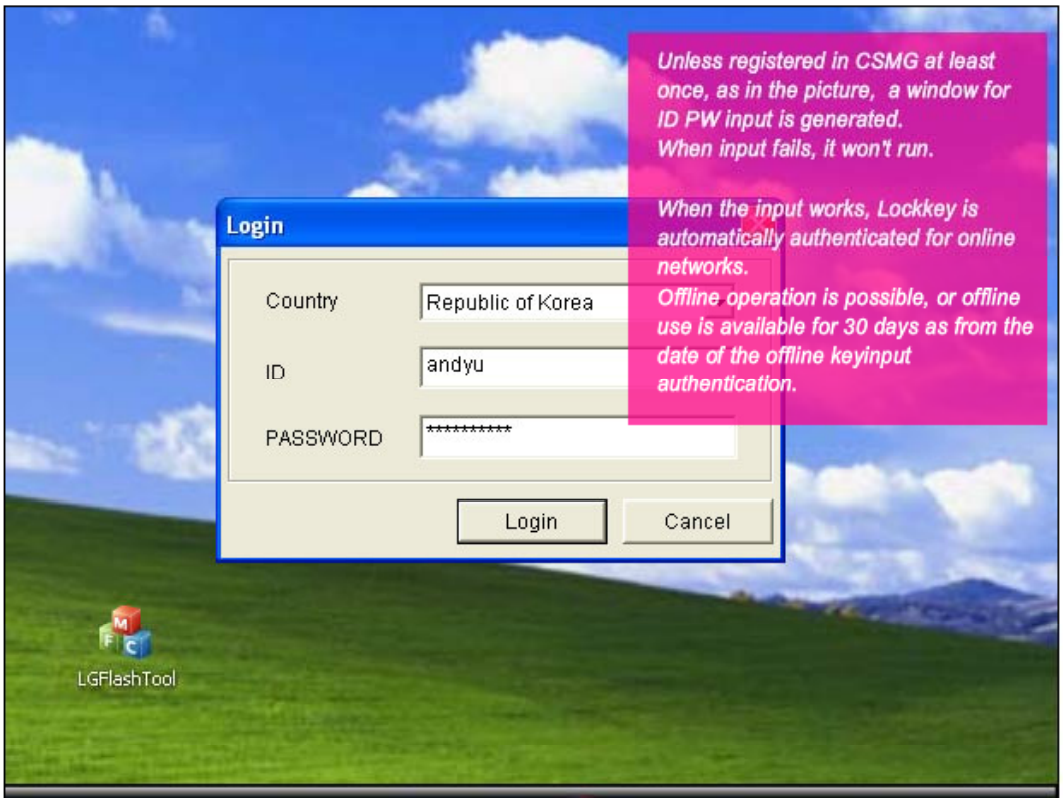


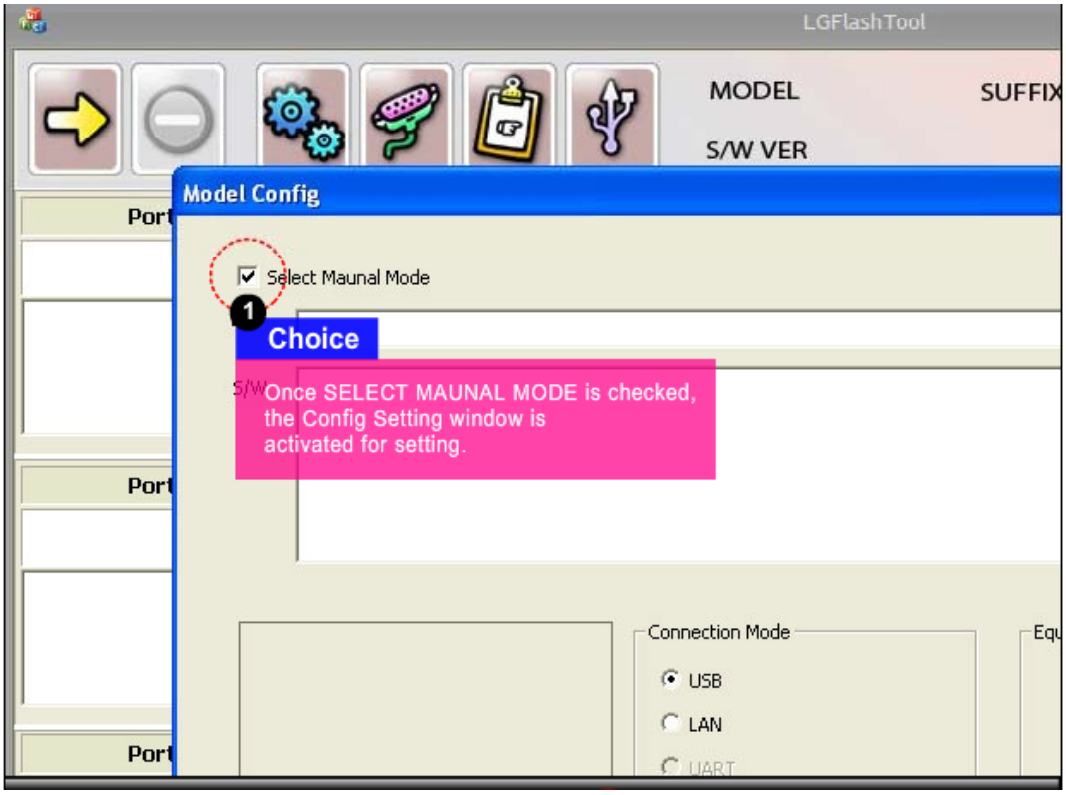


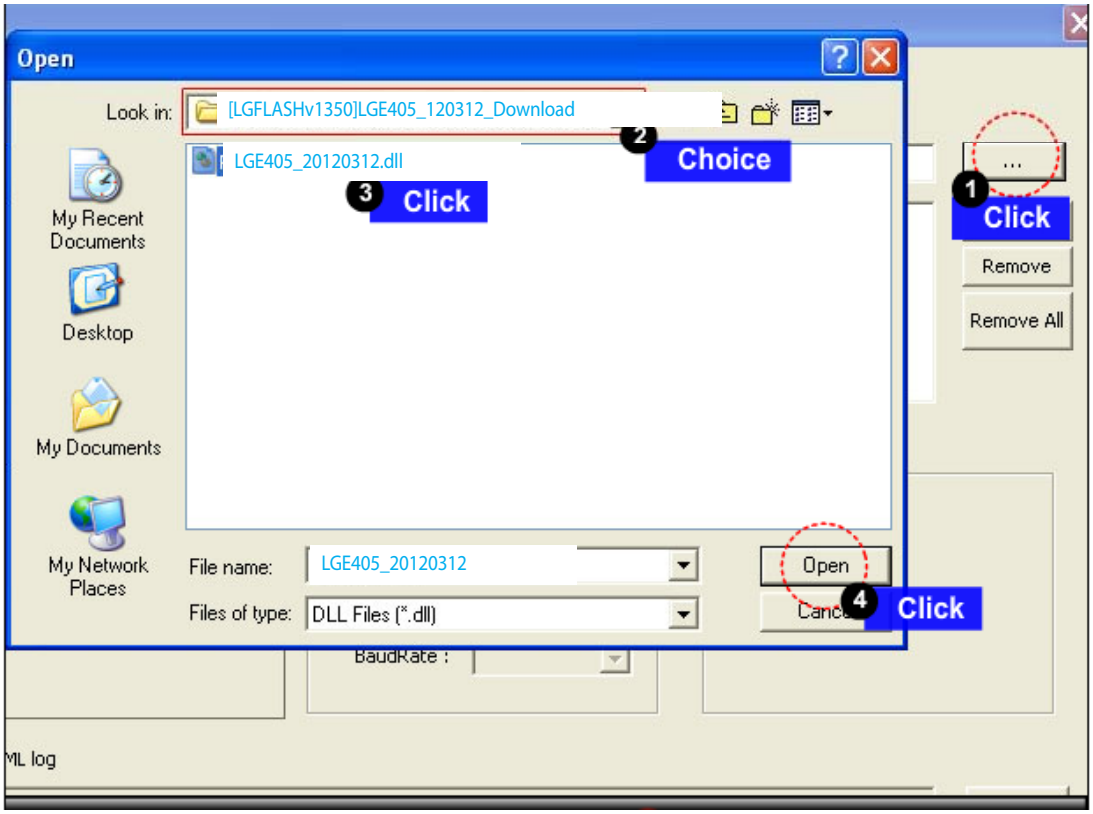


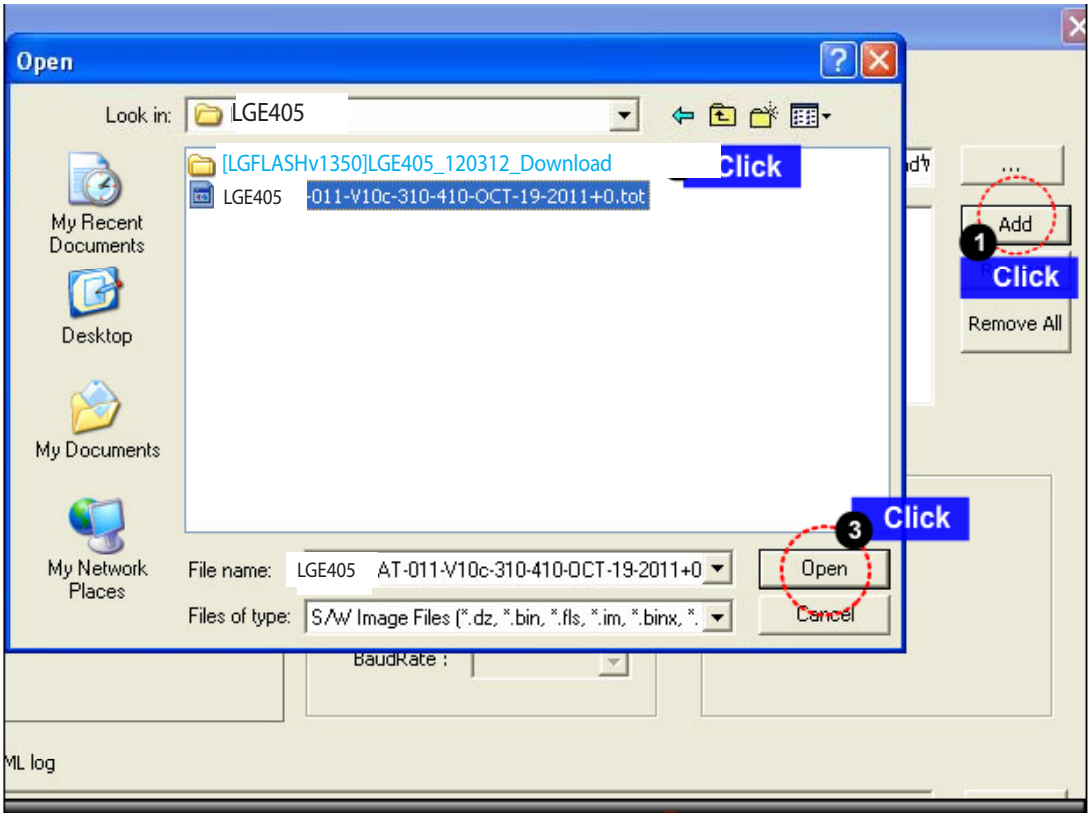


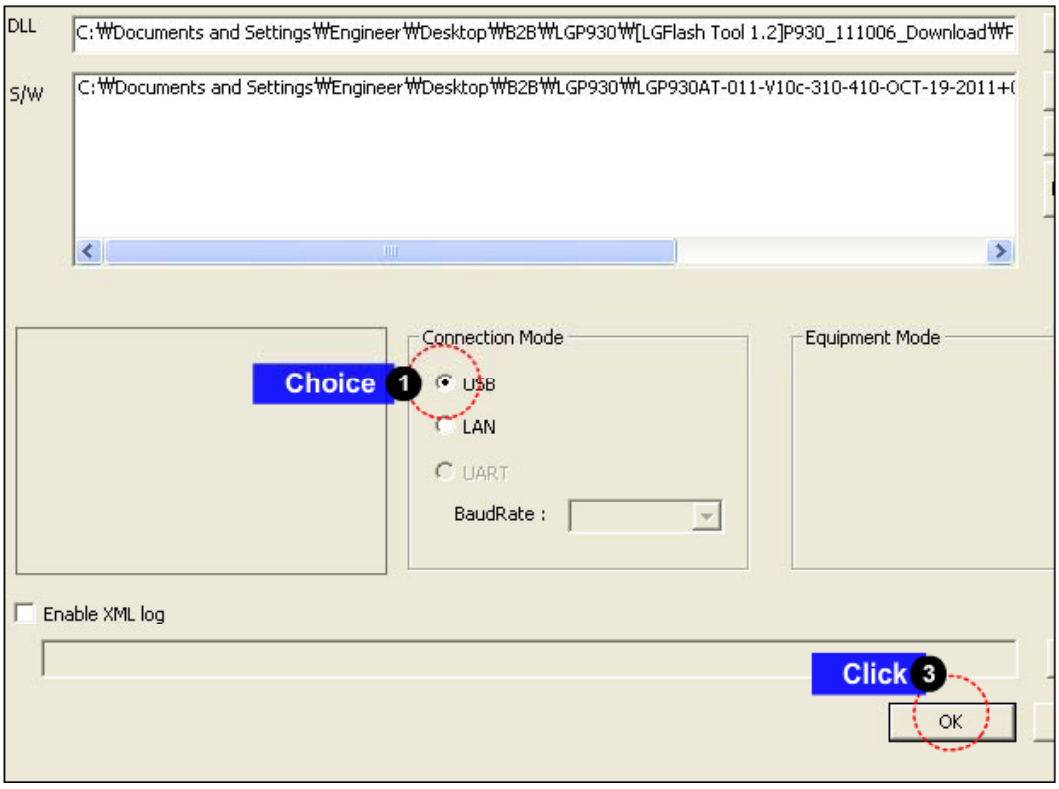


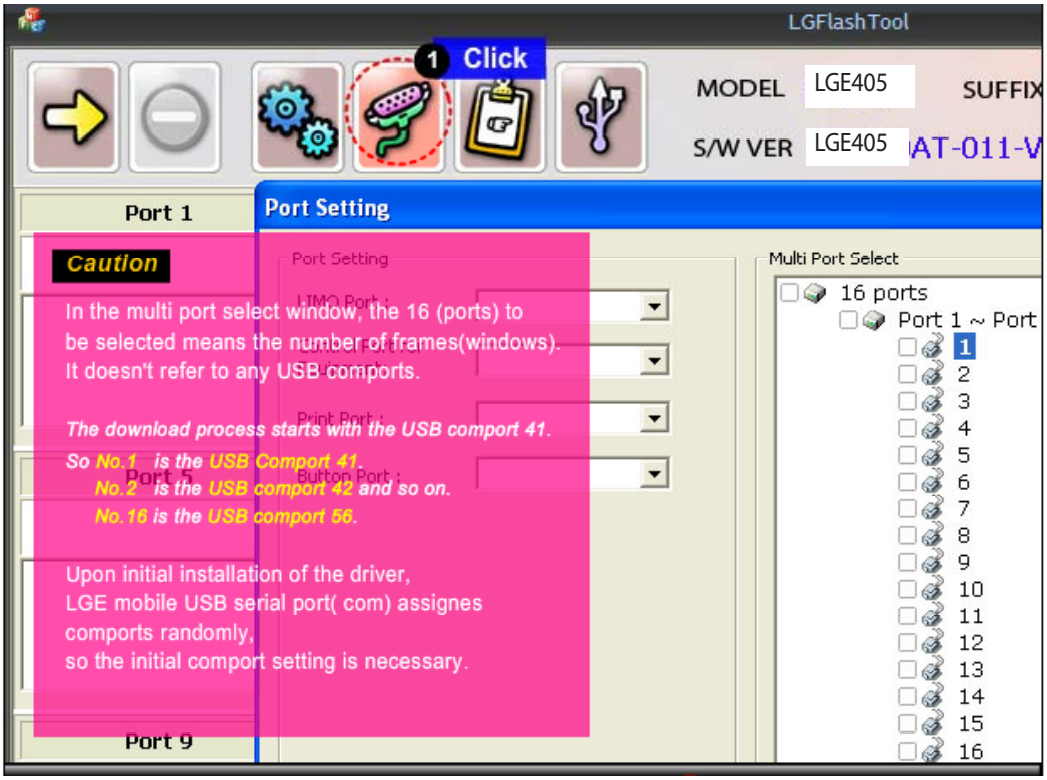


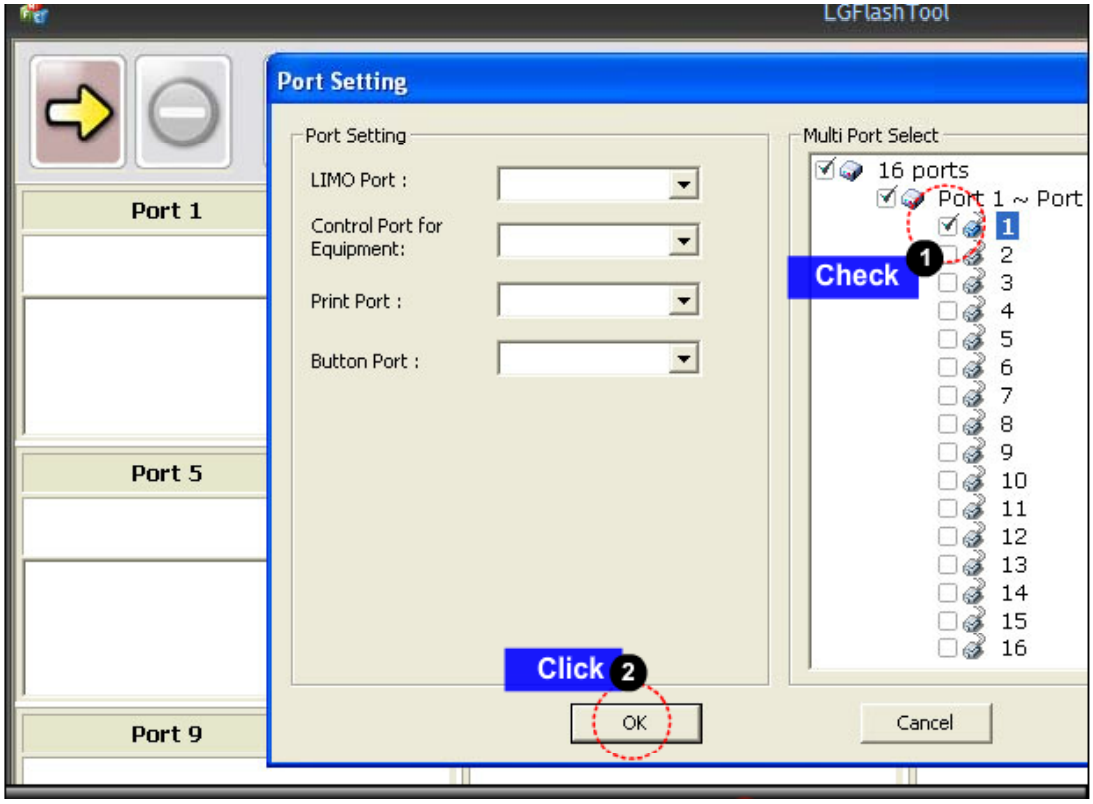


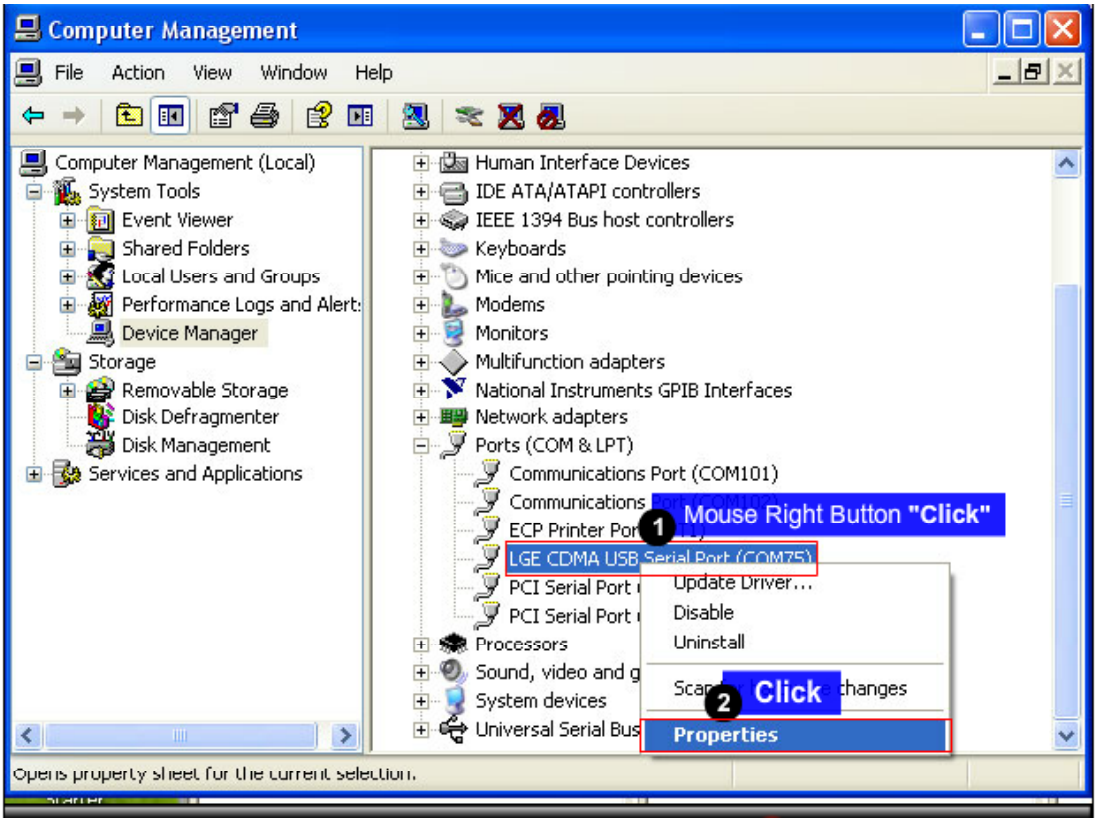


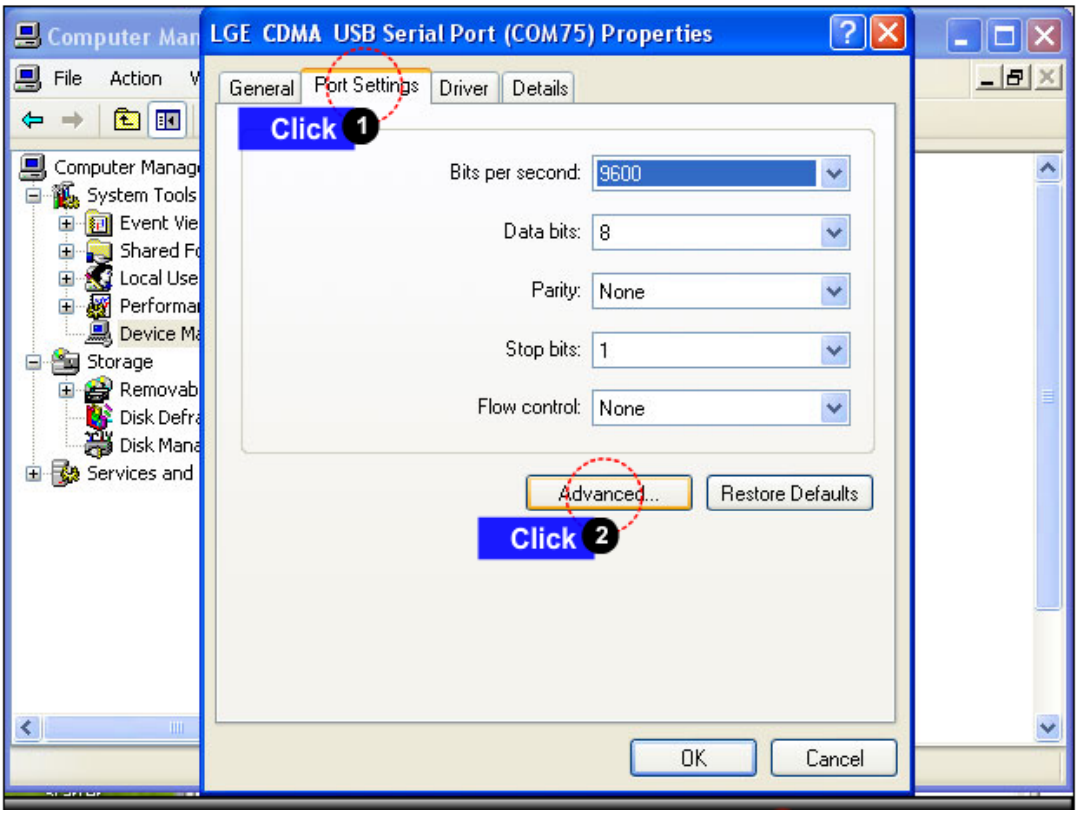


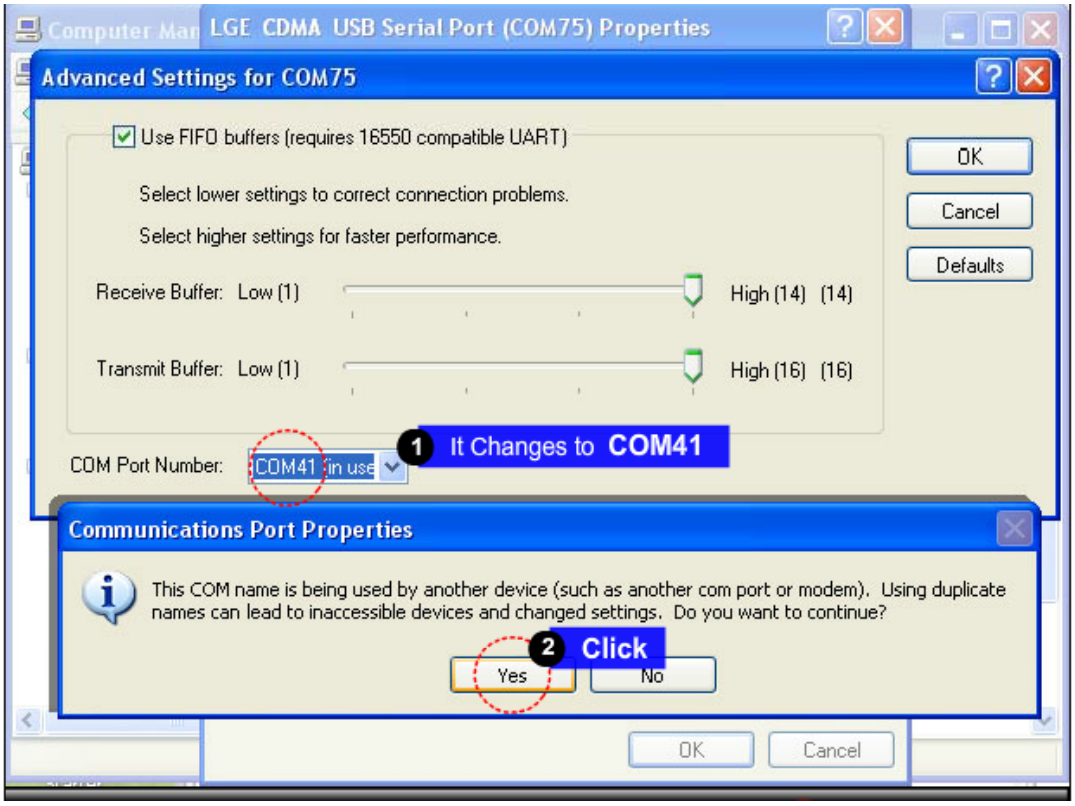


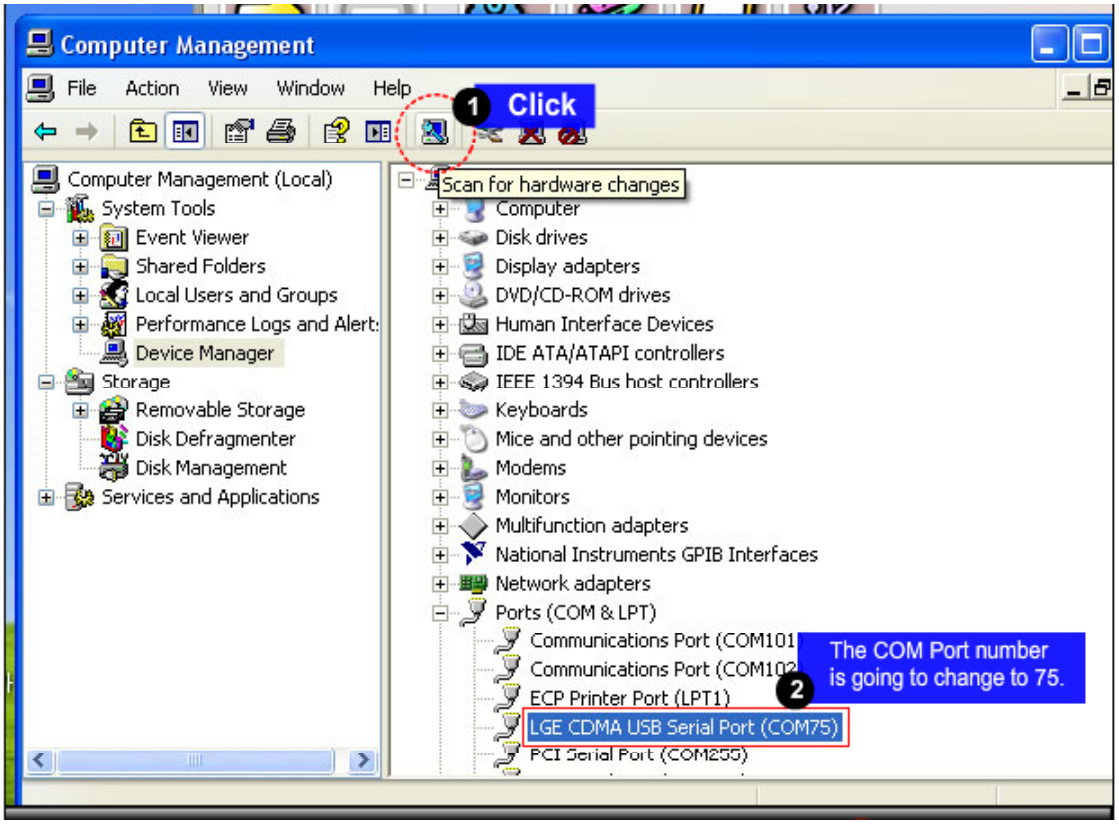


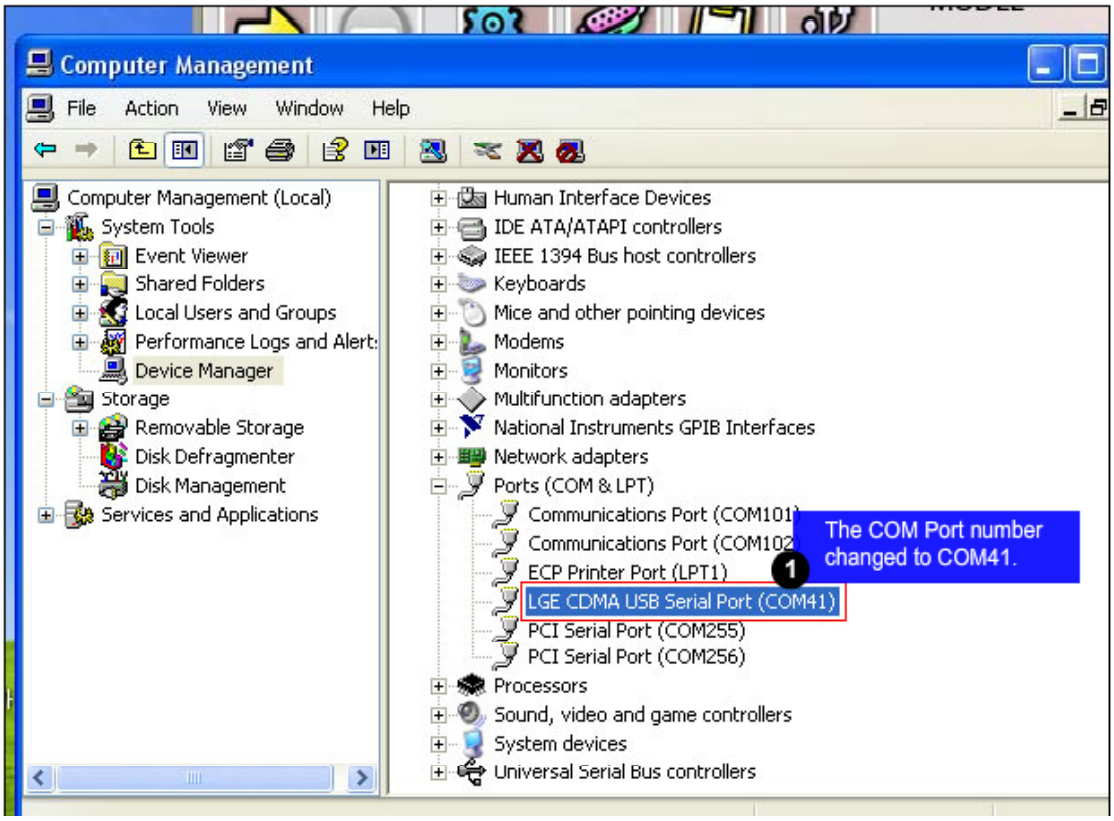


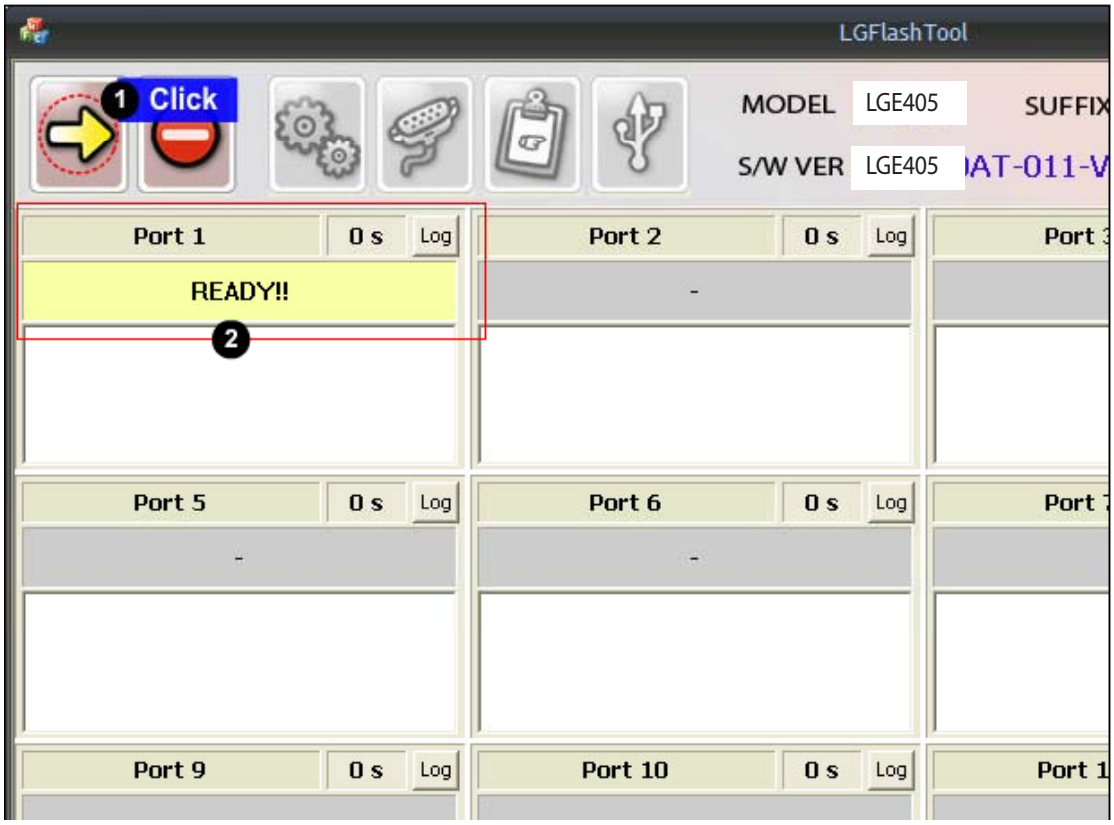


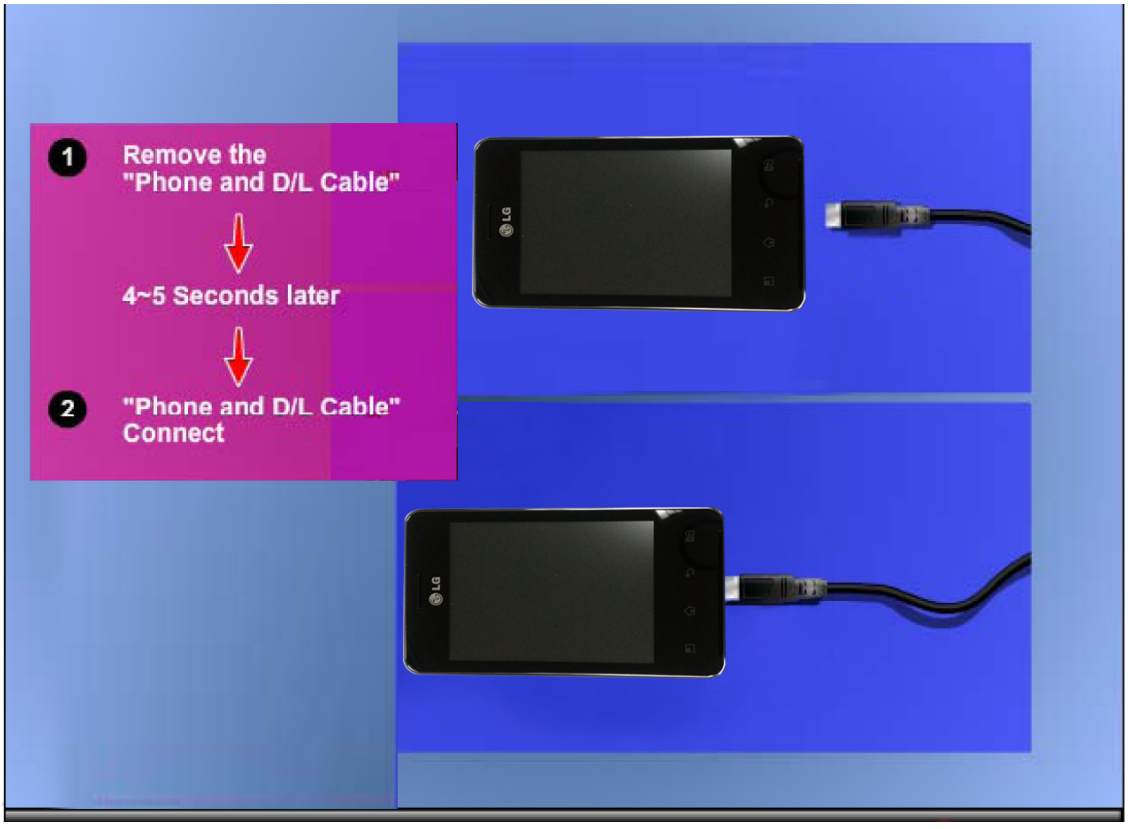


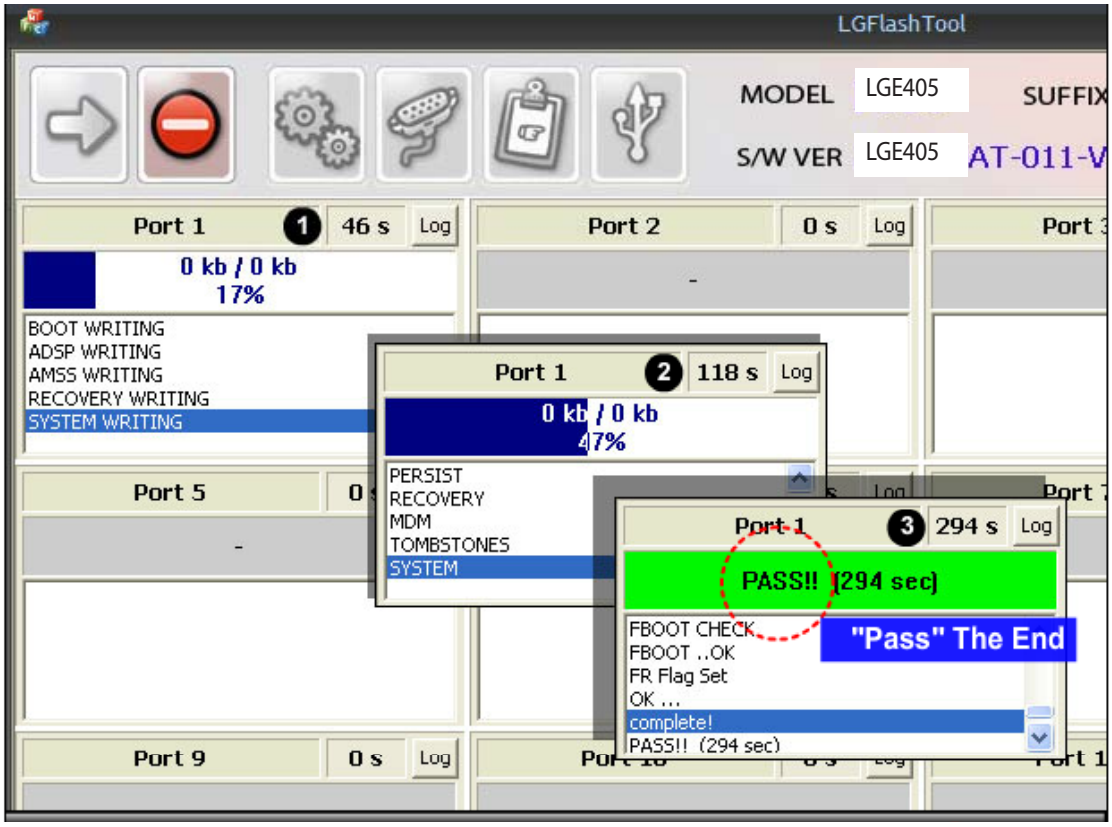






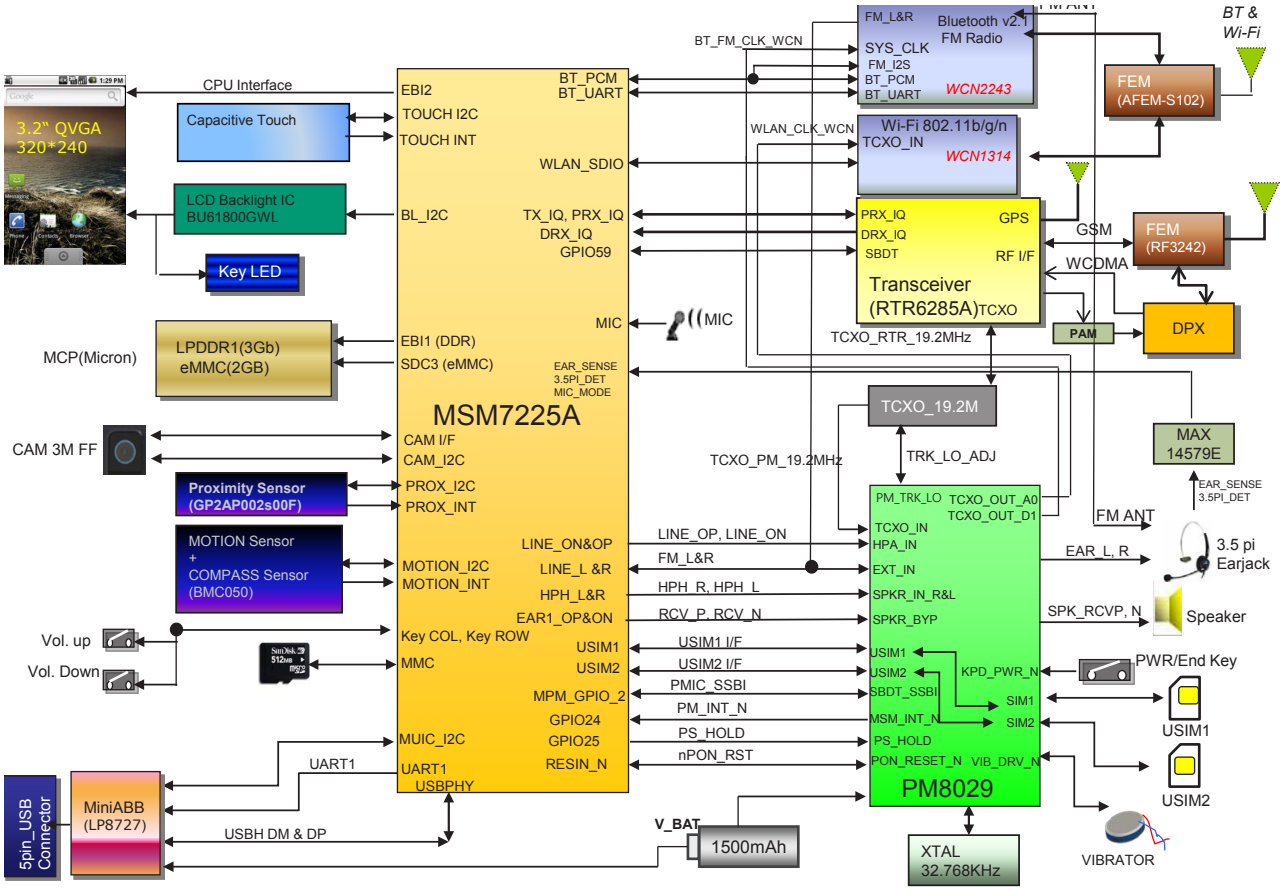




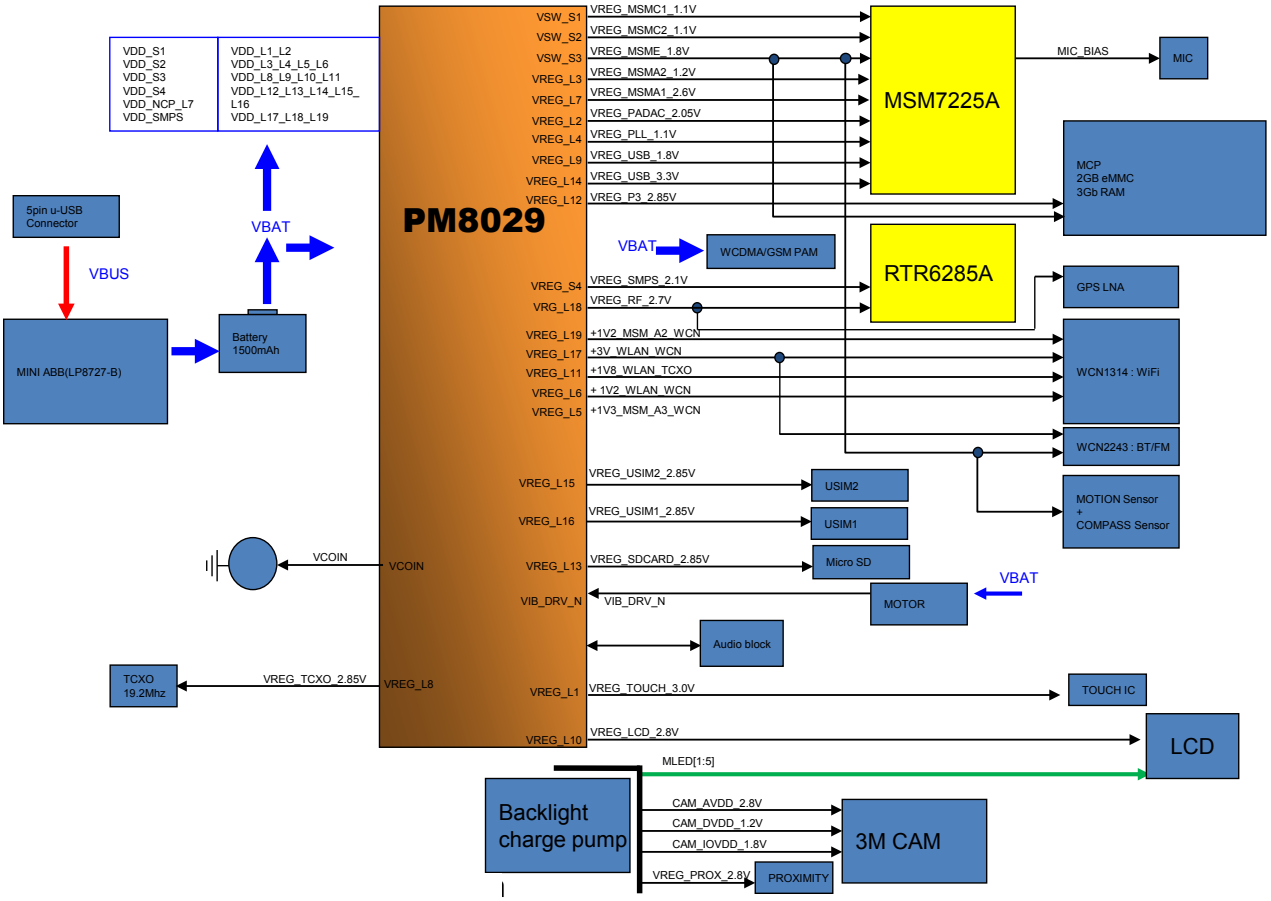


6.Block diagram

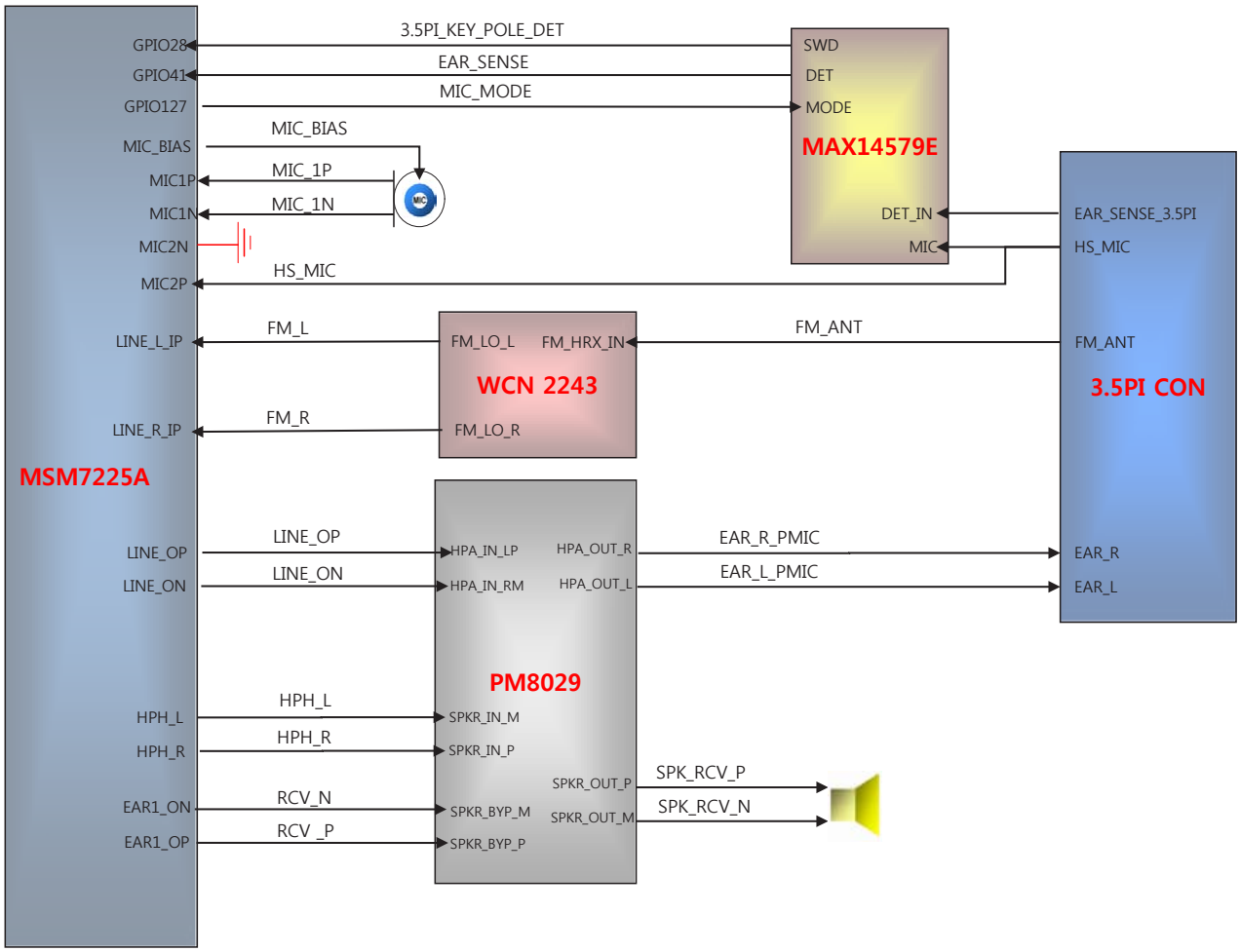
(E405) Block Diagram _ TOTAL



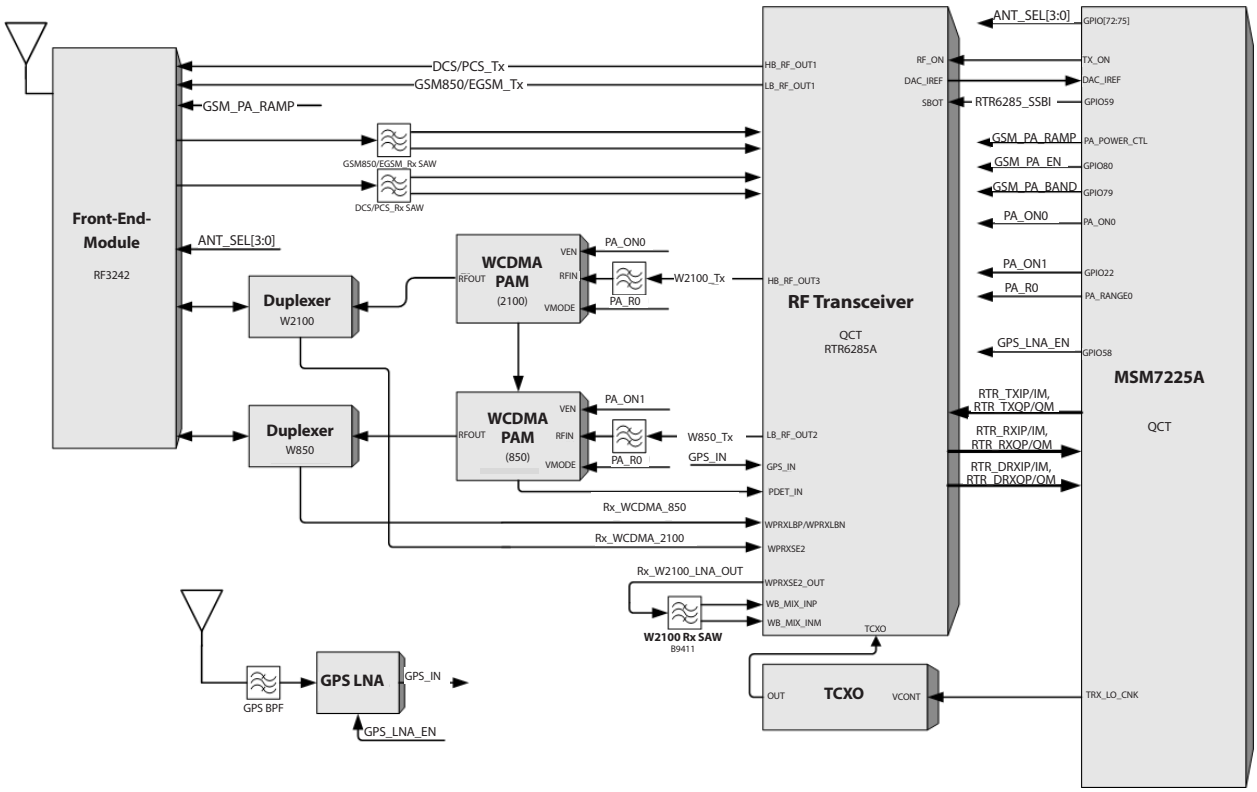
LGE405 Power Block Diagram



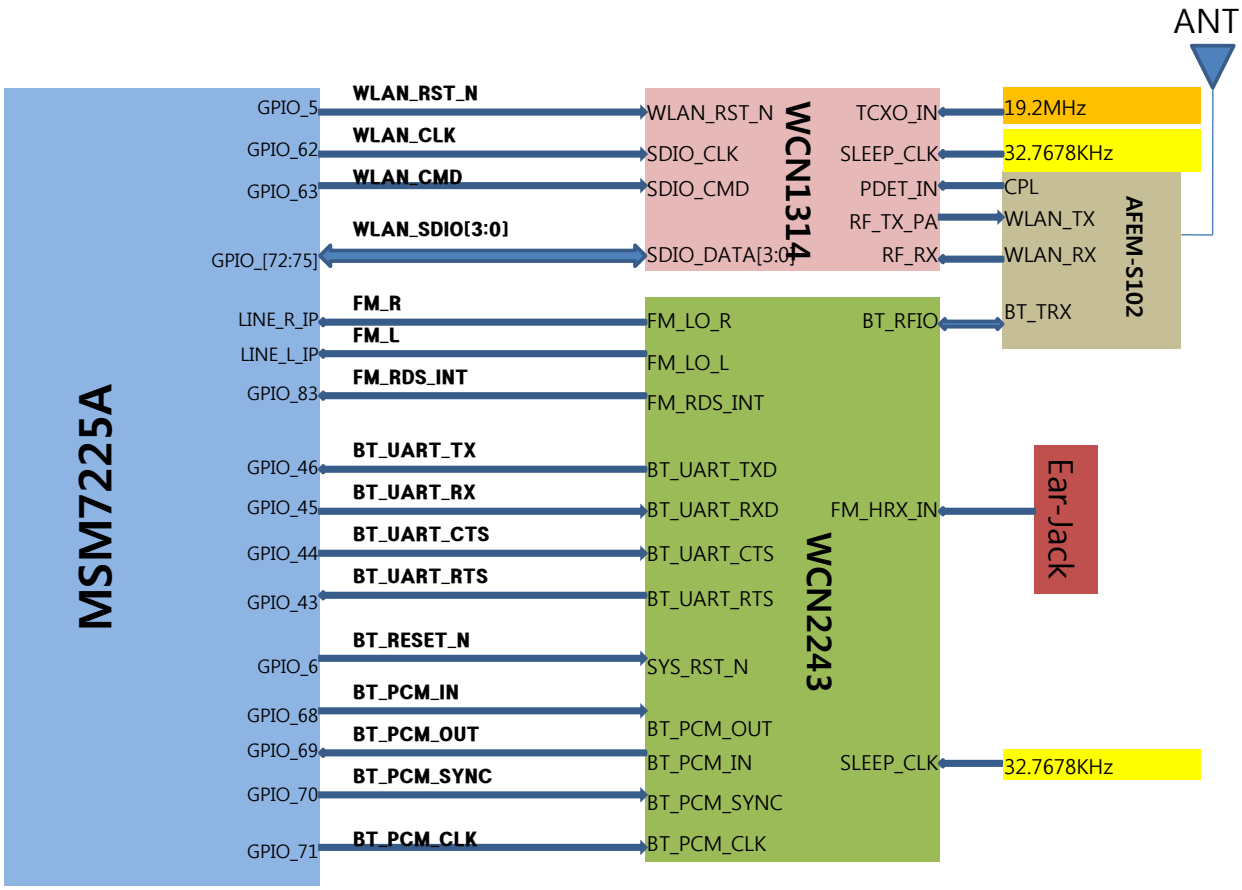
LGE405 Audio Block Diagram



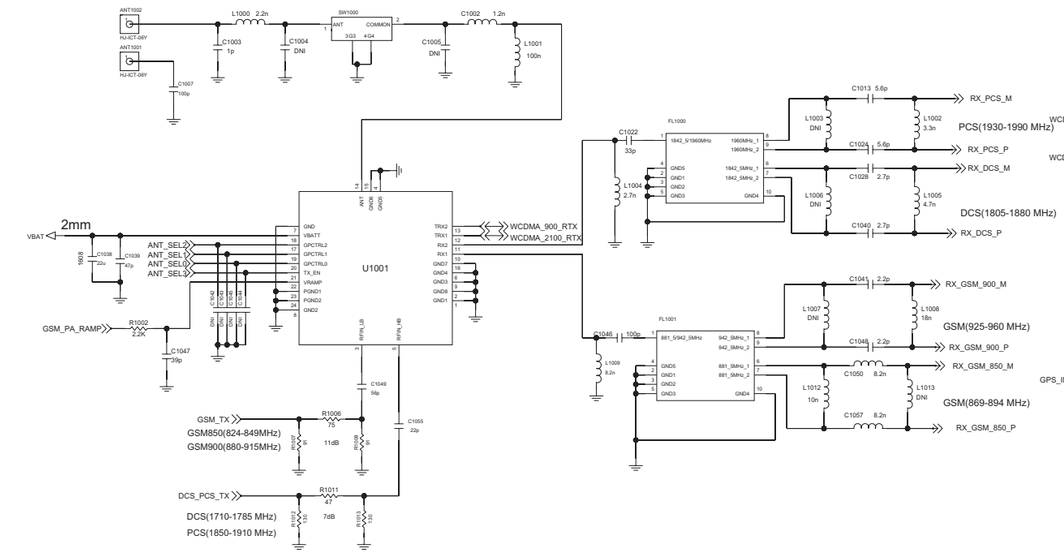
LGE405 RF Block Diagram

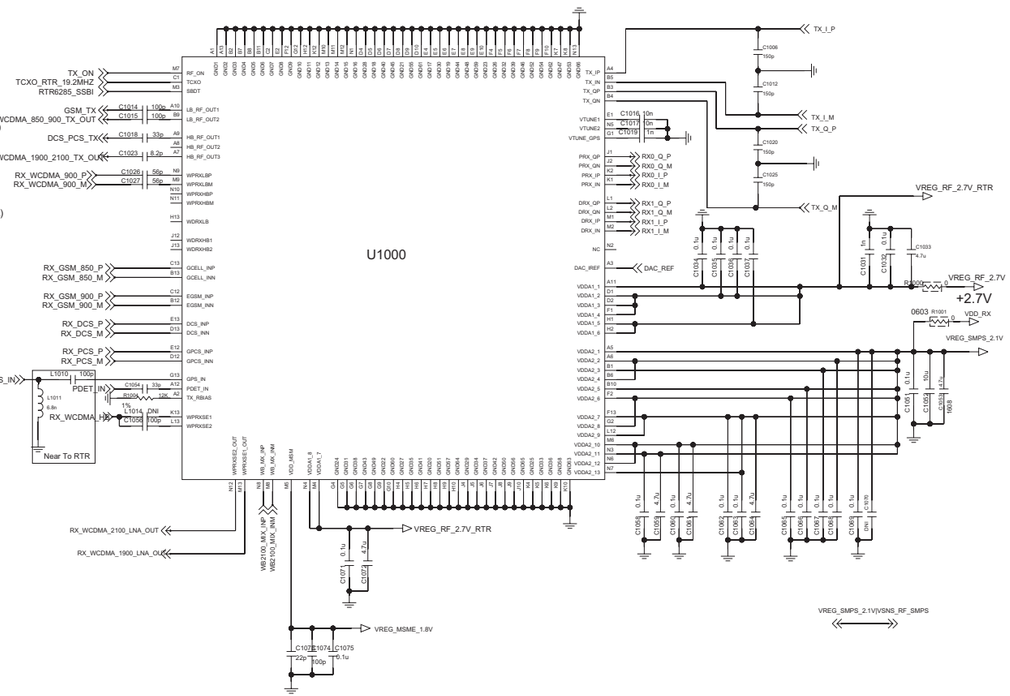


LGE405 BT/WLAN/FM Block Diagram

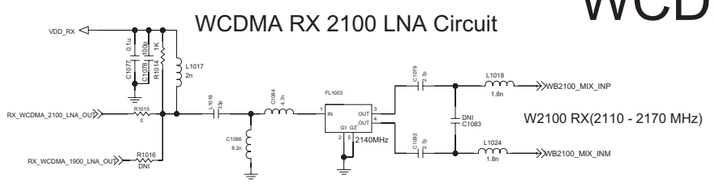


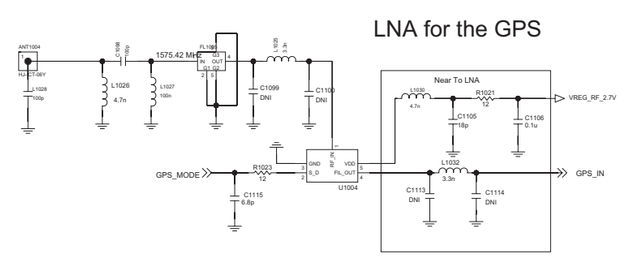
7. CIRCUIT DIAGRAM

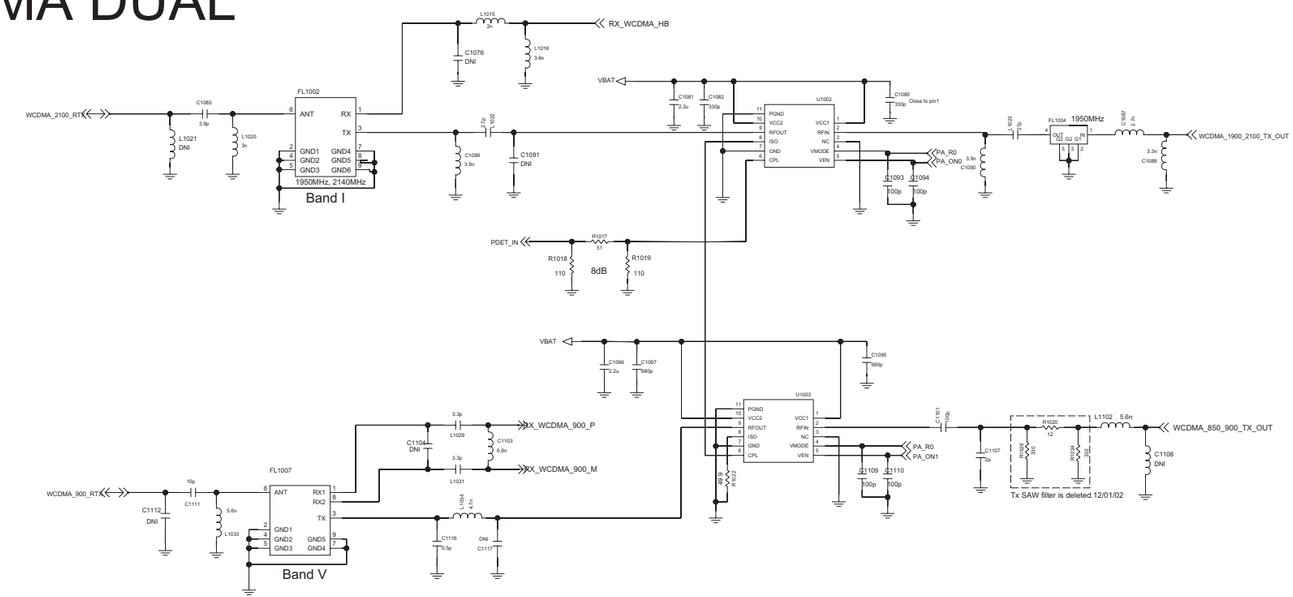


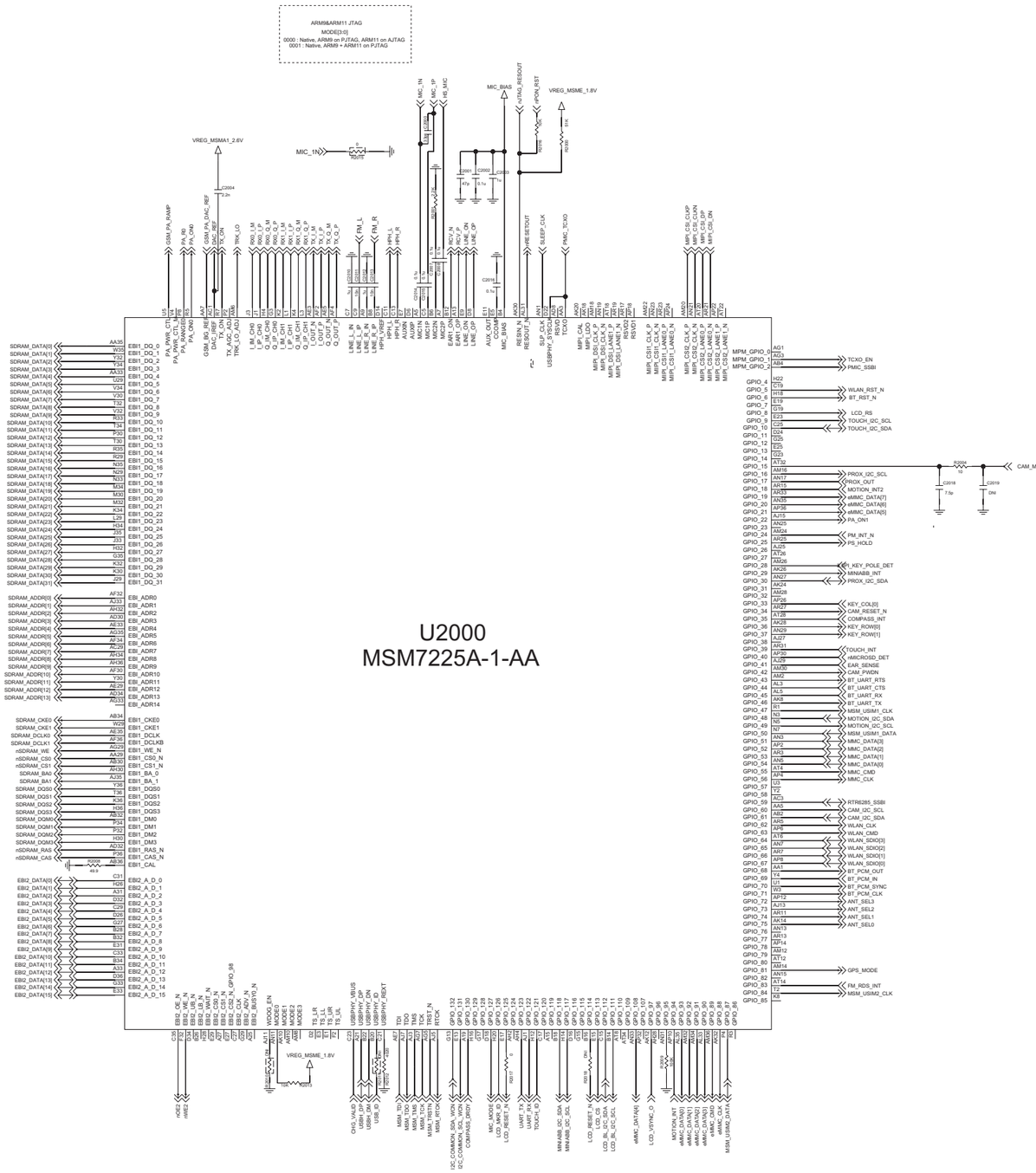


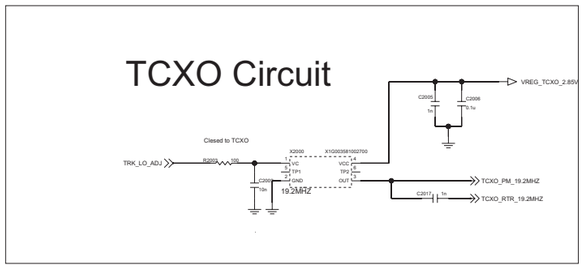
WCDMA DUAL

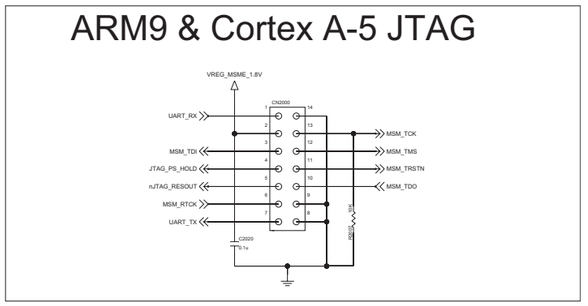




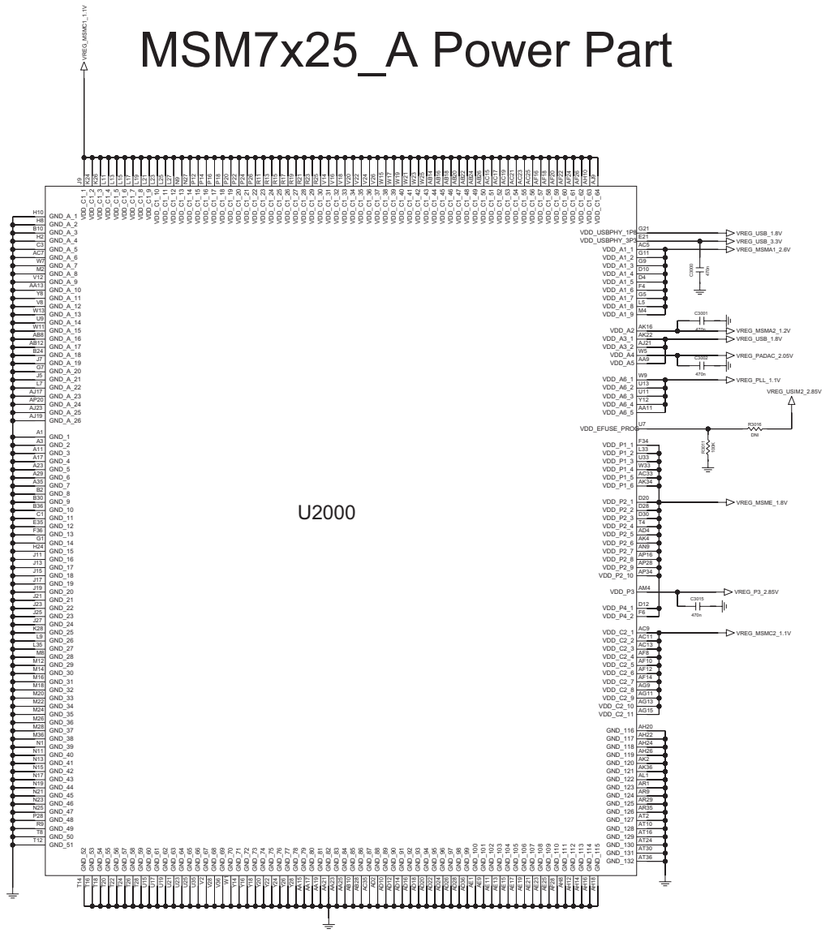




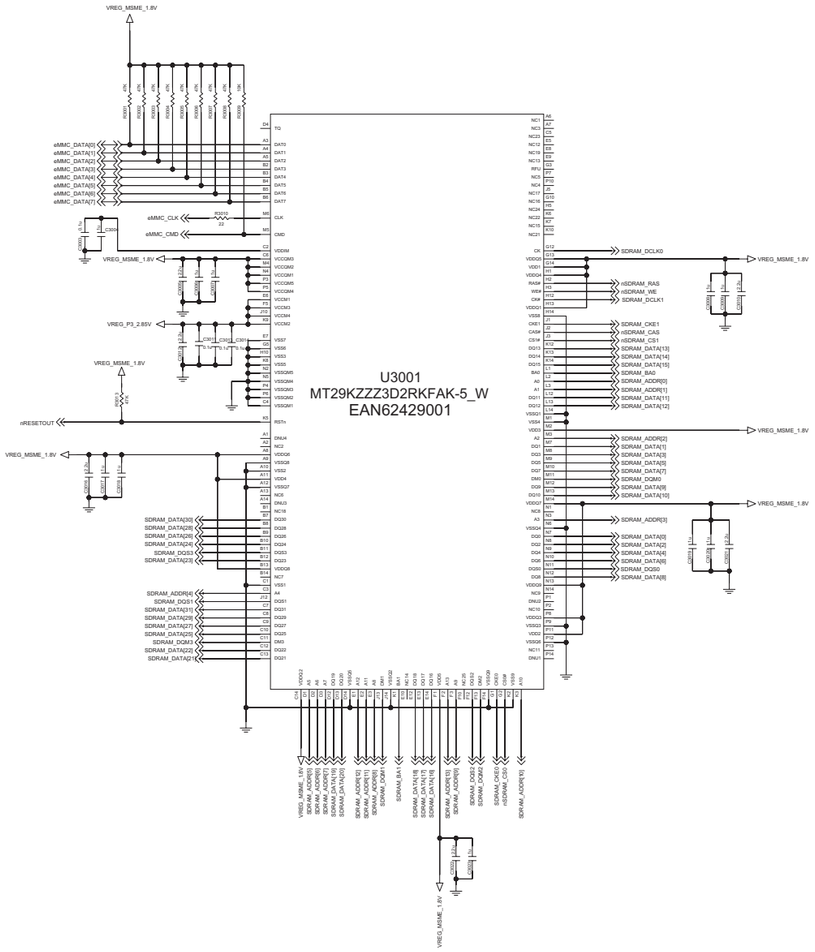




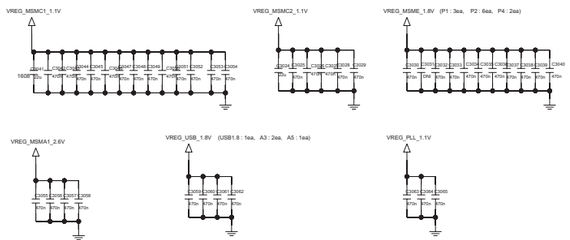
MSM7x25_A Power Part



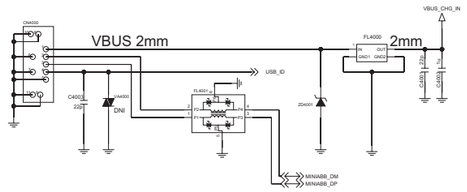
MCP (2GB eMMC v4.41 + 3Gb LPDDR1 200MHz) Micron



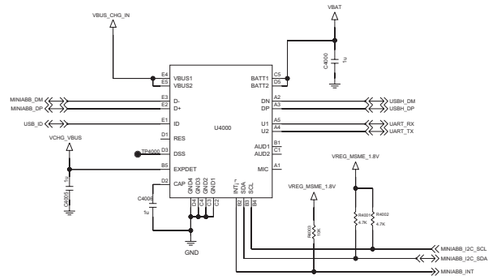
Cap for MSM7x25_A Power



u-USB Connector



Mini ABB_NS



BACK-UP BATTERY

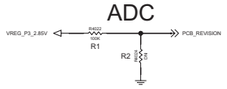
Band Indication

R1 R2

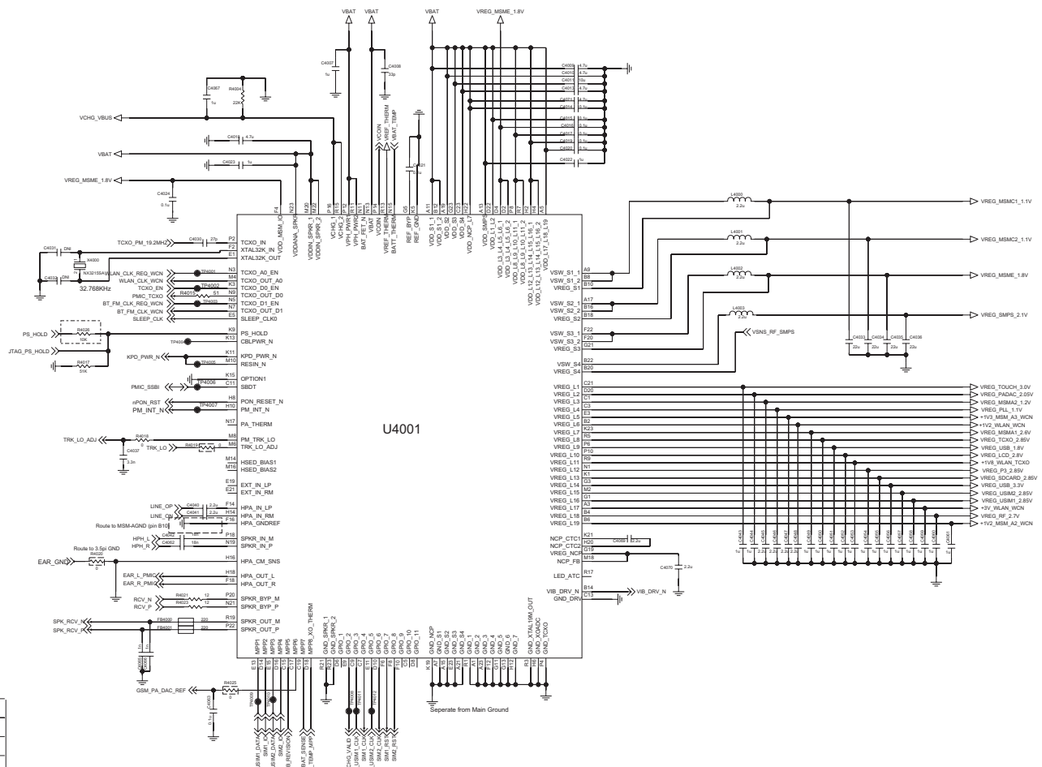
WCDMA BAND	R1	R2
E4005 (1 / 5)	OPEN	OPEN
E4005 (1 / 8)	OPEN	750
E4005 (2 / 5)	750	OPEN

* 750 Ohm P/N: ERHZ0000493

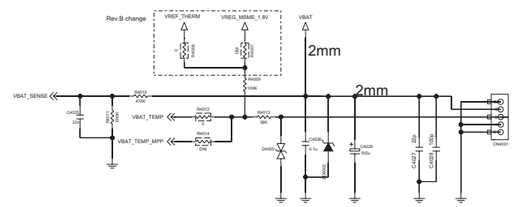
ADC



Revision	R1	R2	ADC Range(HEX.)
1.0 (PV)	100K	OPEN	
A	100K	5.6K	00.16
B	100K	12K	17.25
C	100K	19.1K	26.34
D	100K	27K	35.42
E	100K	36K	43.51
F	100K	47K	52.5E
1.0	100K	100K	83.95
1.1	100K	130K	96.A9

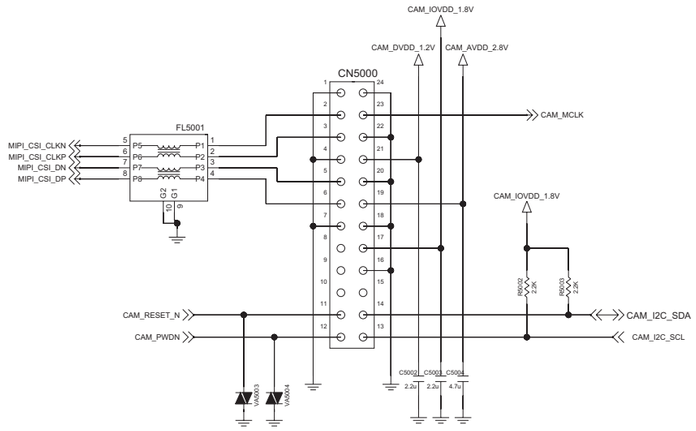


Battery Conn.

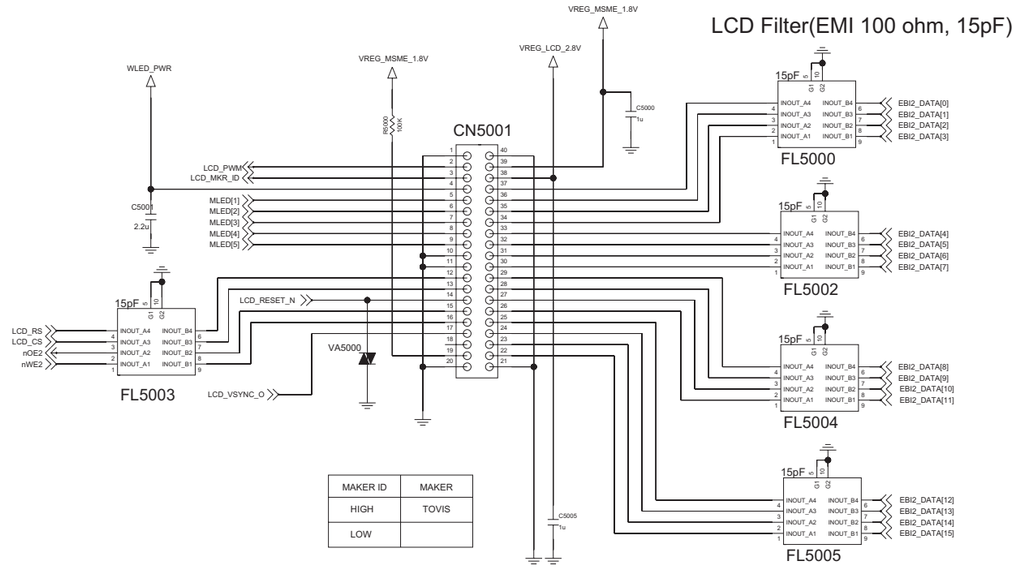


Must Check Battery Conn. Pin Map

3M CAMERA

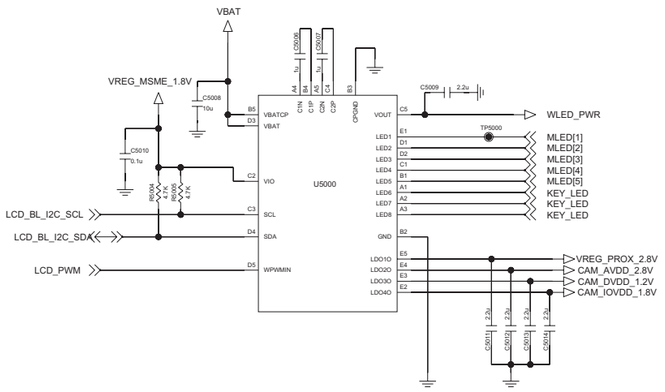


3.2" QVGA LCD Connector

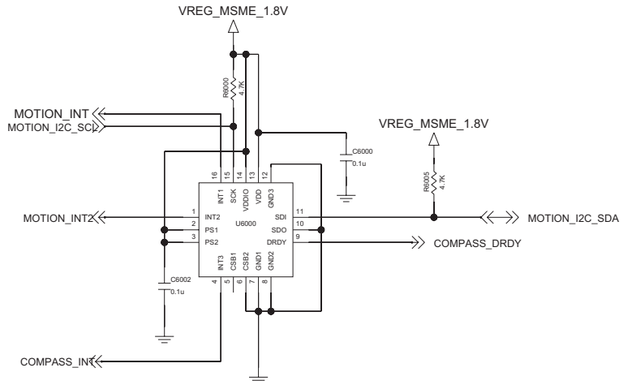


MAKER ID	MAKER
HIGH	TOVIS
LOW	

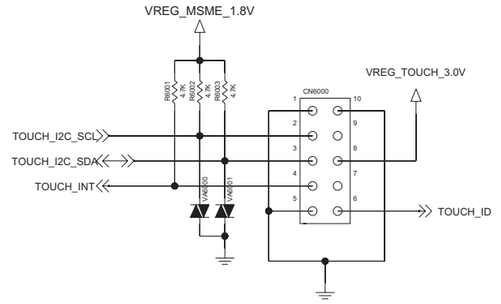
BACKLIGHT CHARGE PUMP



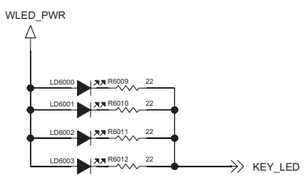
Digital Compass
Accelerometer sensor



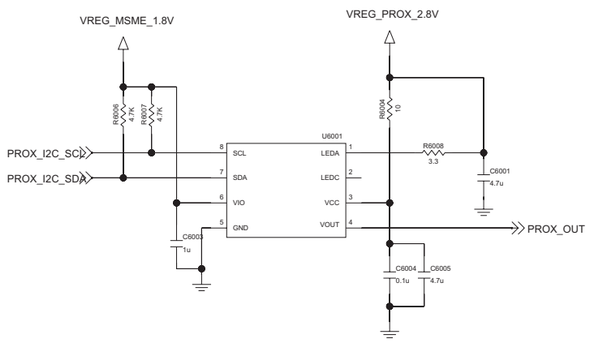
TOUCH



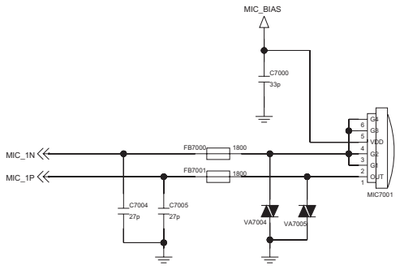
KEY BACKLIGHT LED



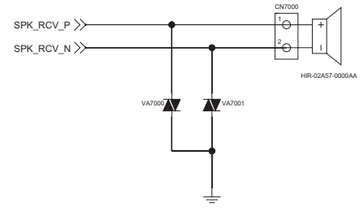
Proximity sensor



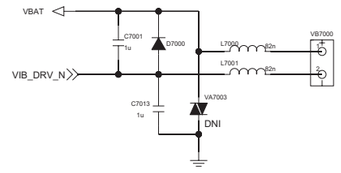
MEMS MIC



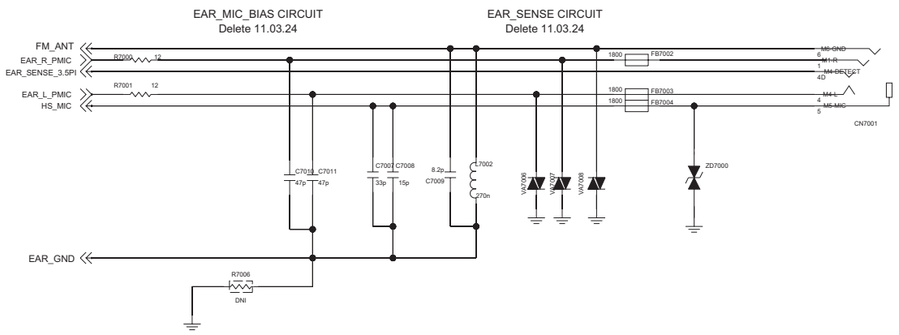
SPEAKER



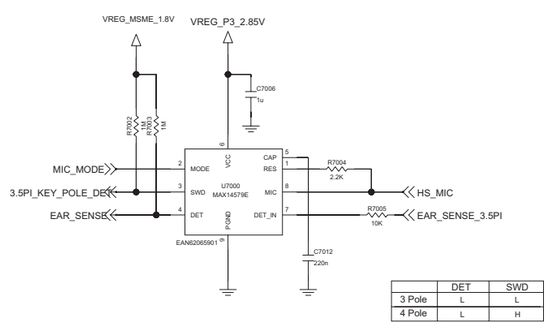
VIBRATOR



3.5pi Ear Jack Connector

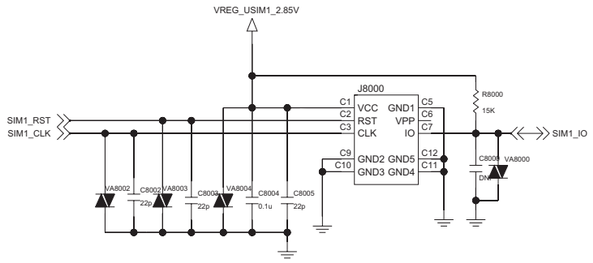


HEADSET_DETECT

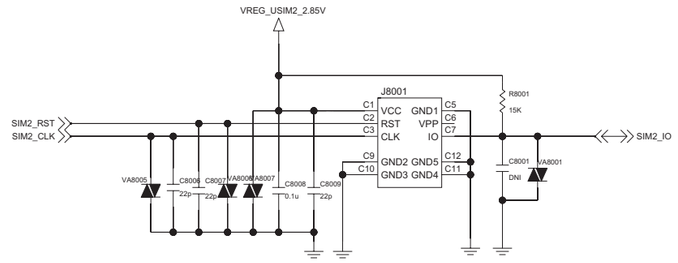


	DET	SWD
3 Pole	L	L
4 Pole	L	H

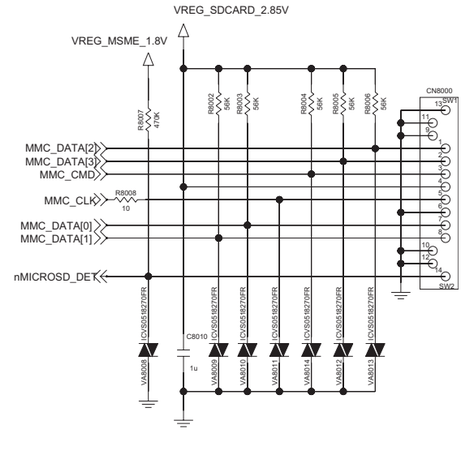
USIM1 Socket



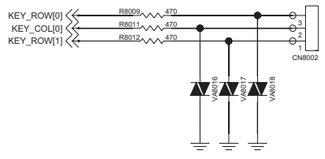
USIM2 Socket



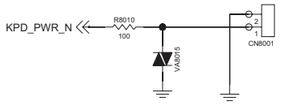
MICRO-SD



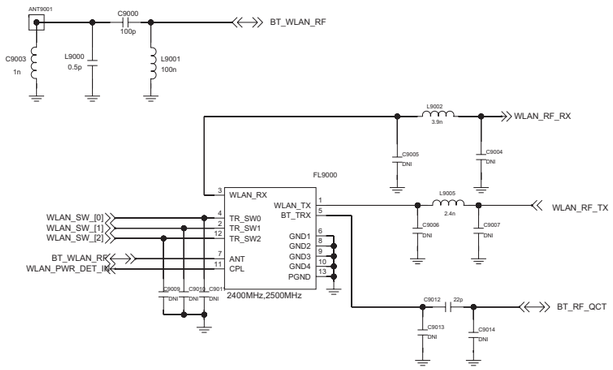
VOLUME SIDEKEY



POWER KEY



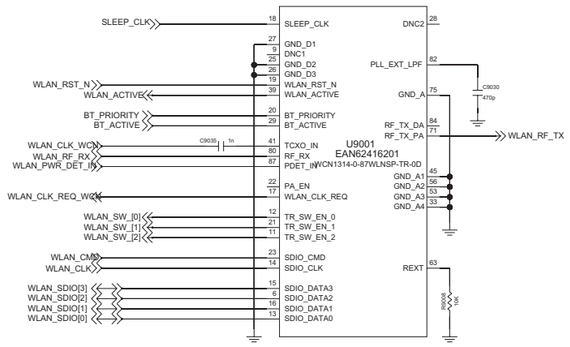
BT/WI-FI FRONT-END



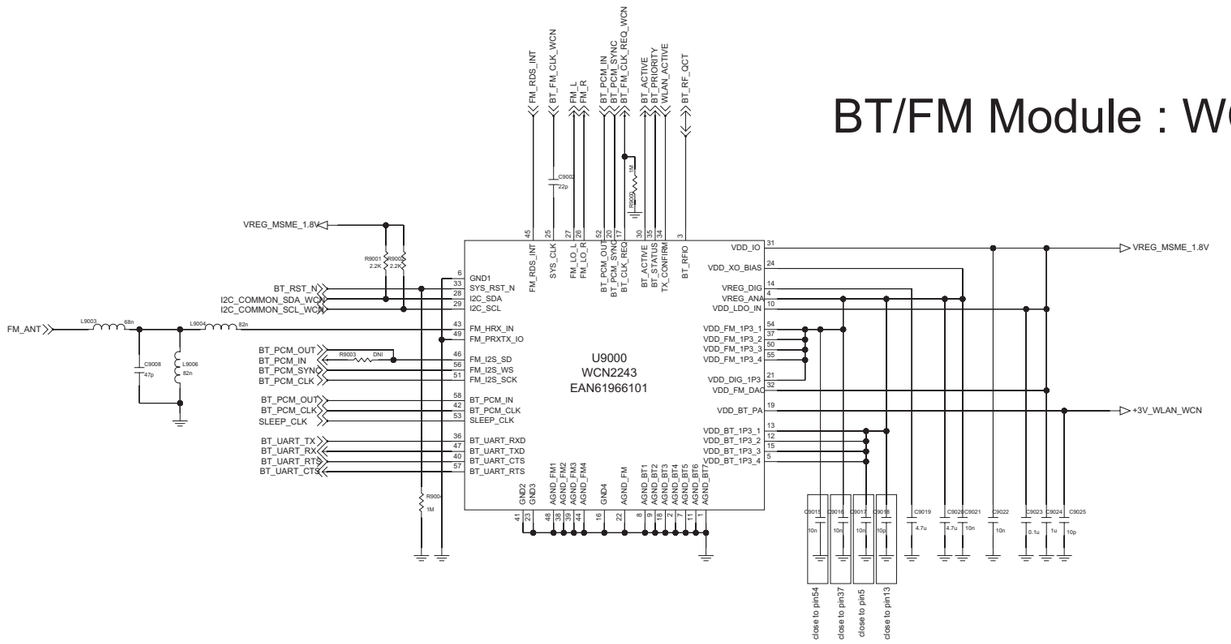
ANTENNA SWITCH MODULE LOGIC

	SW0	SW1	SW2
WiFi RX-ANT	HIGH	LOW	LOW
WiFi TX-ANT	LOW	HIGH	LOW
BT-ANT	LOW	LOW	HIGH

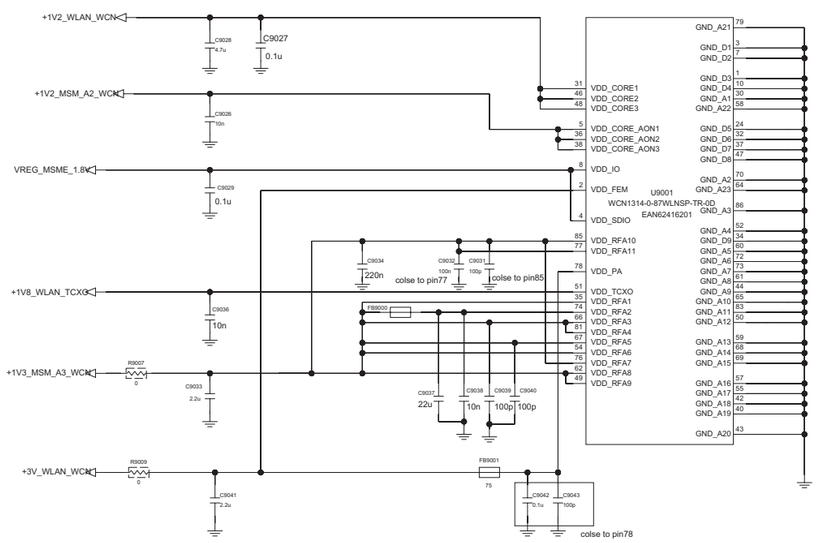
Wi-Fi : WCN1314



BT/FM Module : WCN2243

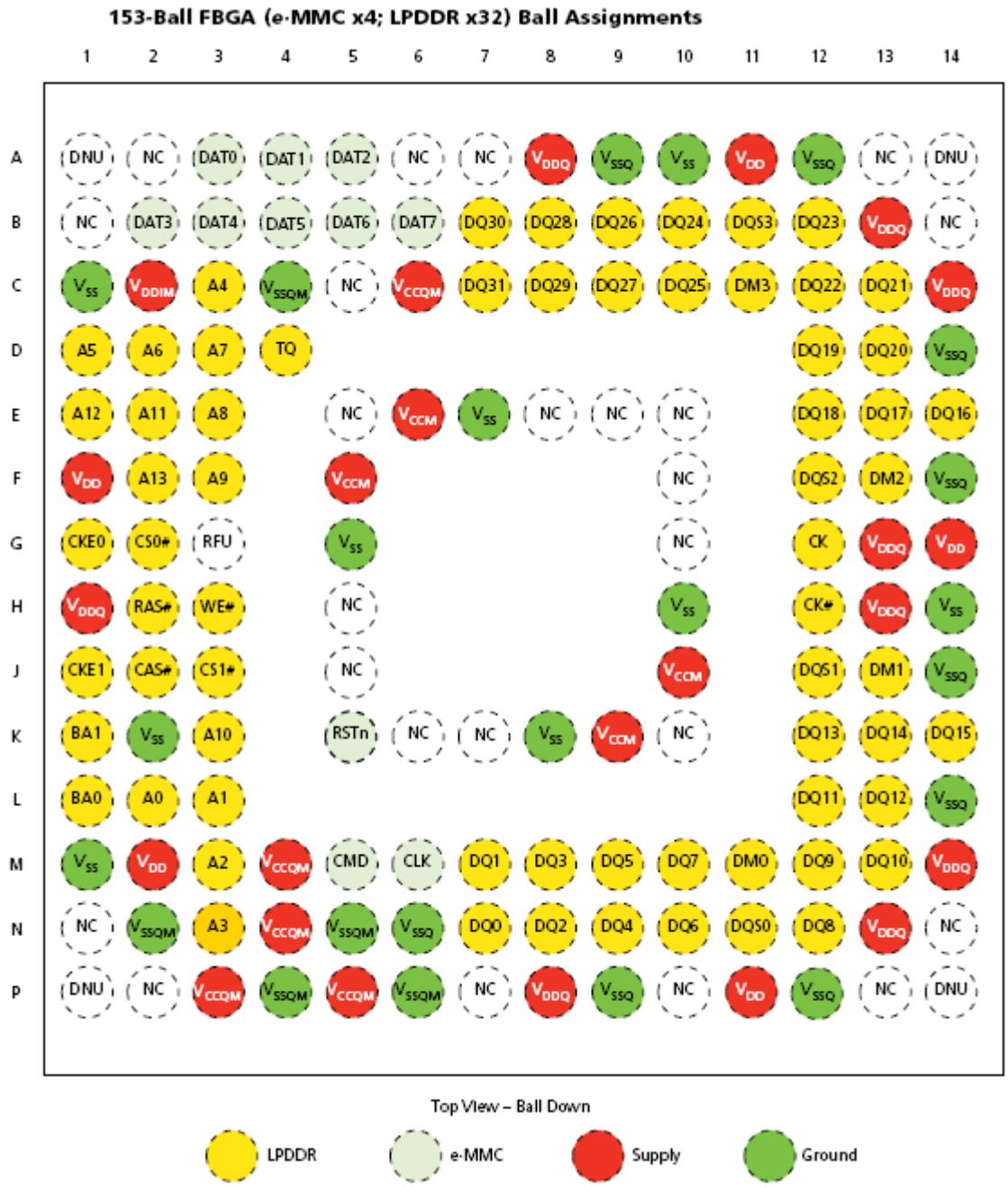


WiFi : WCN 1314

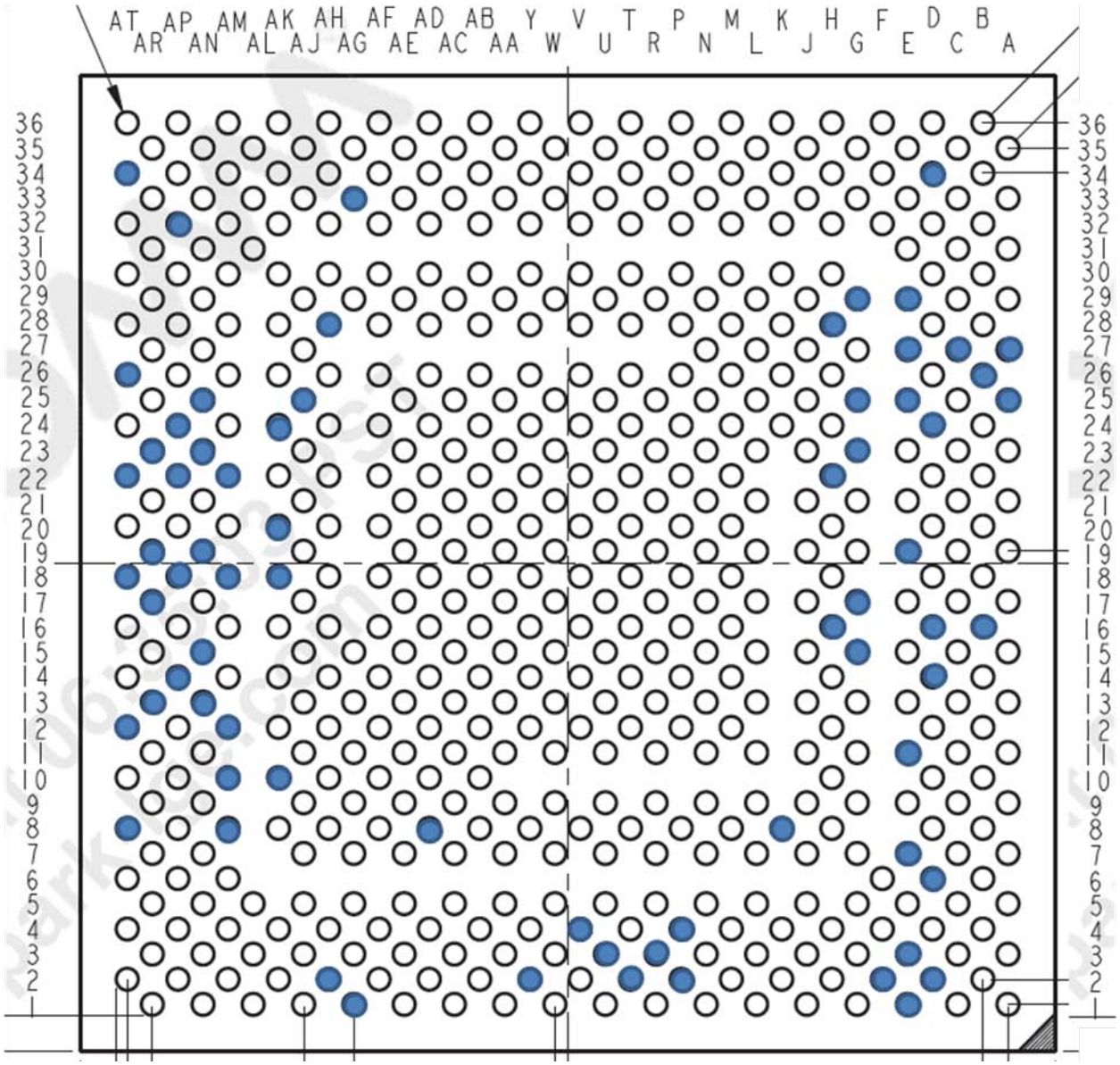


8. BGA PIN MAP

U3001 - Memory MCP (Top View)



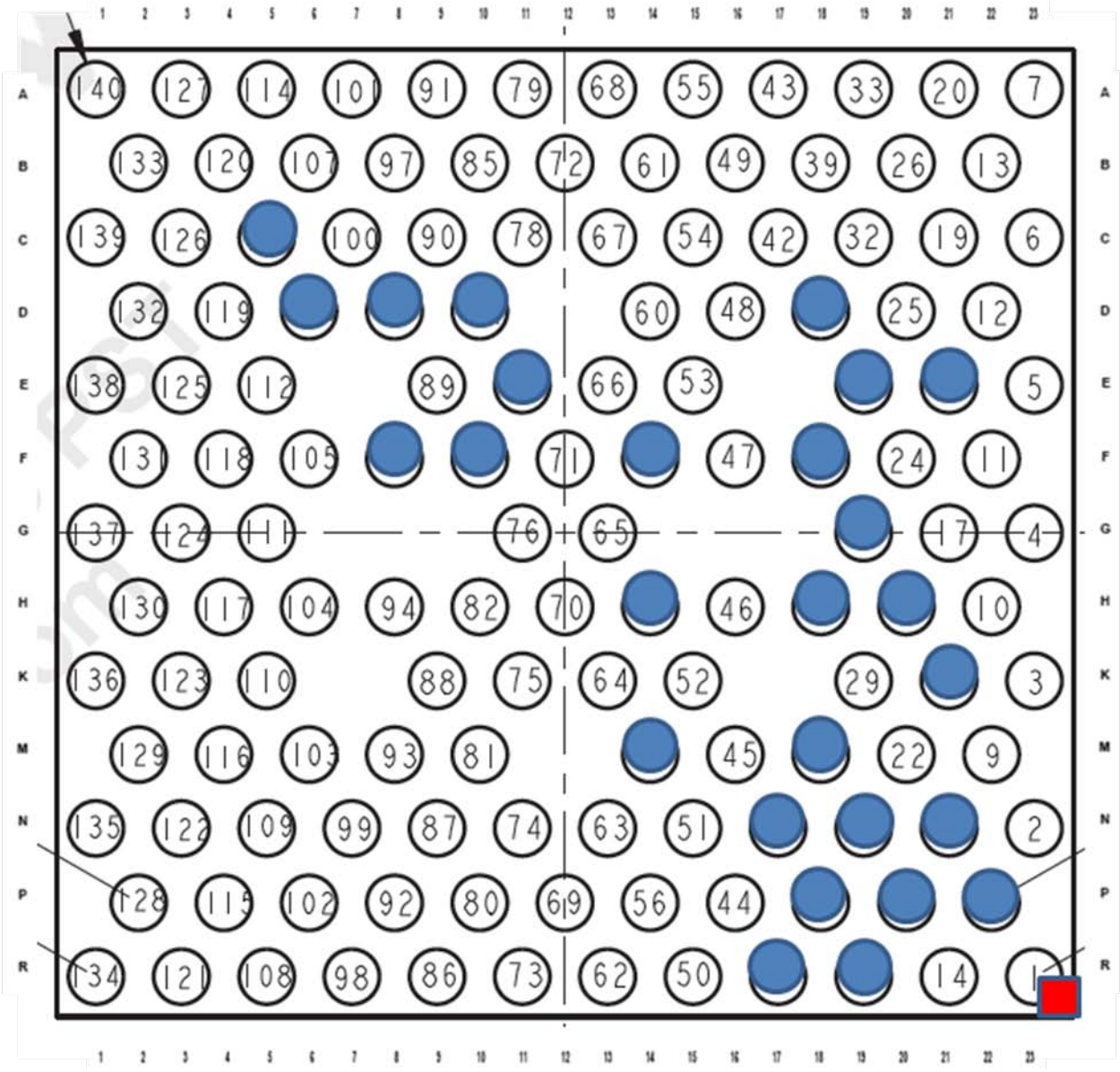
U2000 - MSM7225A (Top View)aaaa



○ USE

● NOT IN USE

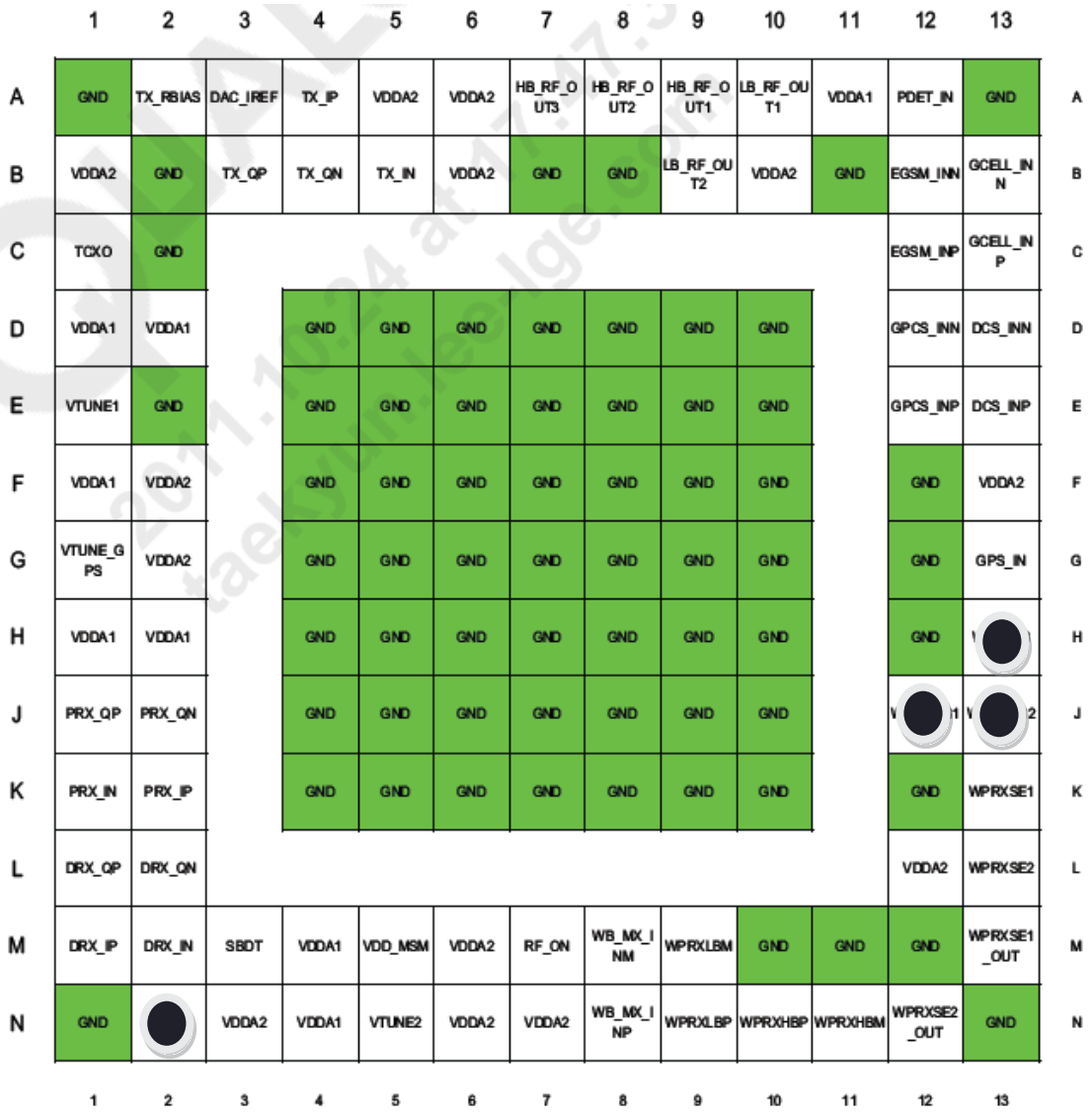
U4001 - PM8029 (Bottom View)



○ USE

● NOT IN USE

U1000 - RTR6285A (Top View)

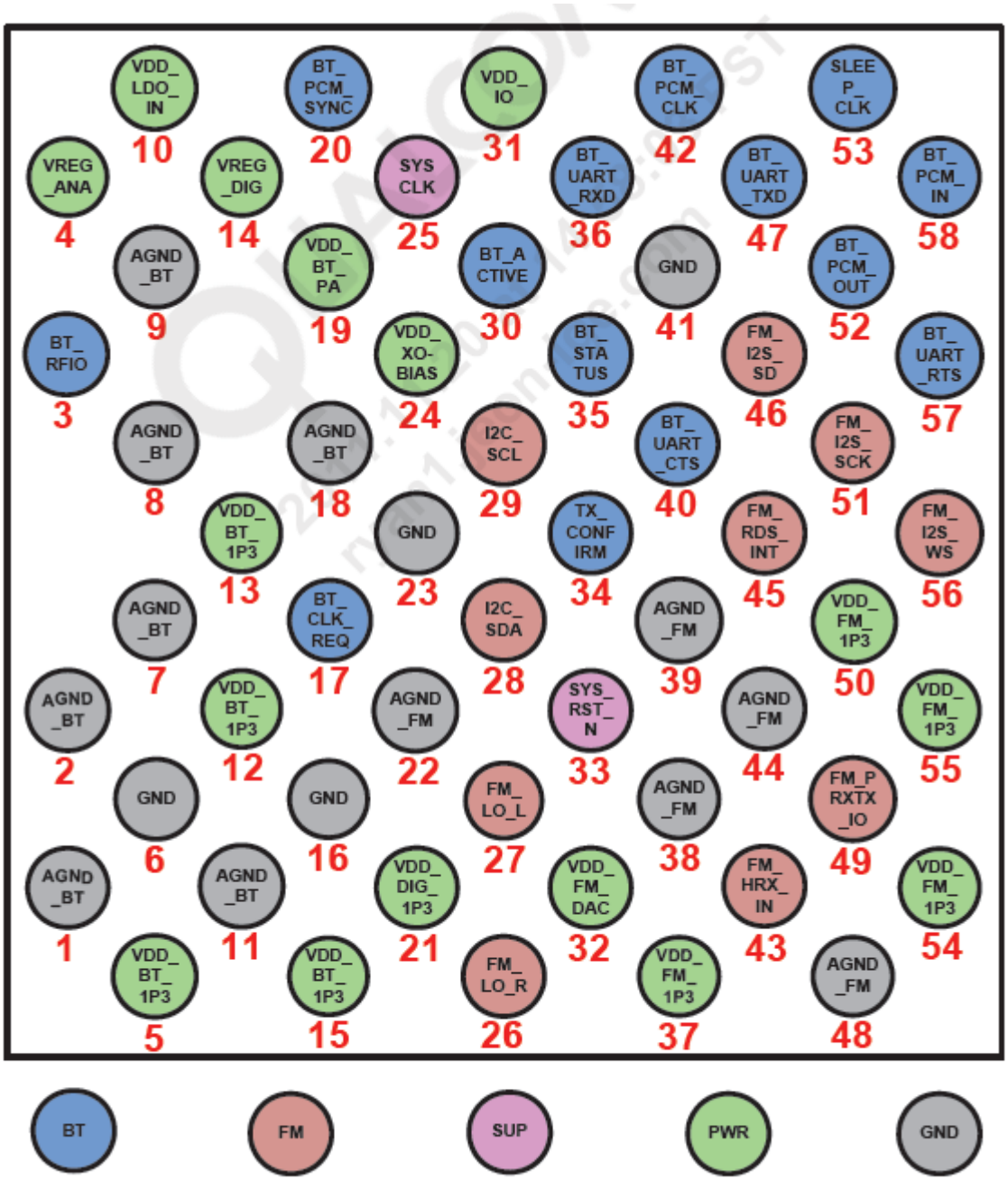


	1	2	3	4	5	6	7	8	9	10	11	12	13	
A	GND	TX_RBIAS	DAC_IREF	TX_IP	VDDA2	VDDA2	HB_RF_OUT3	HB_RF_OUT2	HB_RF_OUT1	LB_RF_OUT1	VDDA1	PDET_IN	GND	A
B	VDDA2	GND	TX_QP	TX_QN	TX_IN	VDDA2	GND	GND	LB_RF_OUT2	VDDA2	GND	EGSM_INN	GCELL_IN N	B
C	TCXO	GND										EGSM_INP	GCELL_IN P	C
D	VDDA1	VDDA1		GND	GND	GND	GND	GND	GND	GND		GPCS_INN	DCS_INN	D
E	VTUNE1	GND		GND	GND	GND	GND	GND	GND	GND		GPCS_INP	DCS_INP	E
F	VDDA1	VDDA2		GND	GND	GND	GND	GND	GND	GND		GND	VDDA2	F
G	VTUNE_GPS	VDDA2		GND	GND	GND	GND	GND	GND	GND		GND	GPS_IN	G
H	VDDA1	VDDA1		GND	GND	GND	GND	GND	GND	GND		GND		H
J	PRX_QP	PRX_QN		GND	GND	GND	GND	GND	GND	GND				J
K	PRX_IN	PRX_IP		GND	GND	GND	GND	GND	GND	GND		GND	WPRXSE1	K
L	DRX_QP	DRX_QN										VDDA2	WPRXSE2	L
M	DRX_IP	DRX_IN	SBDT	VDDA1	VDD_MSM	VDDA2	RF_ON	WB_MX_INM	WPRXLBM	GND	GND	GND	WPRXSE1_OUT	M
N	GND		VDDA2	VDDA1	VTUNE2	VDDA2	VDDA2	WB_MX_INP	WPRXLBP	WPRXHBP	WPRXHBM	WPRXSE2_OUT	GND	N
	1	2	3	4	5	6	7	8	9	10	11	12	13	

○ USE

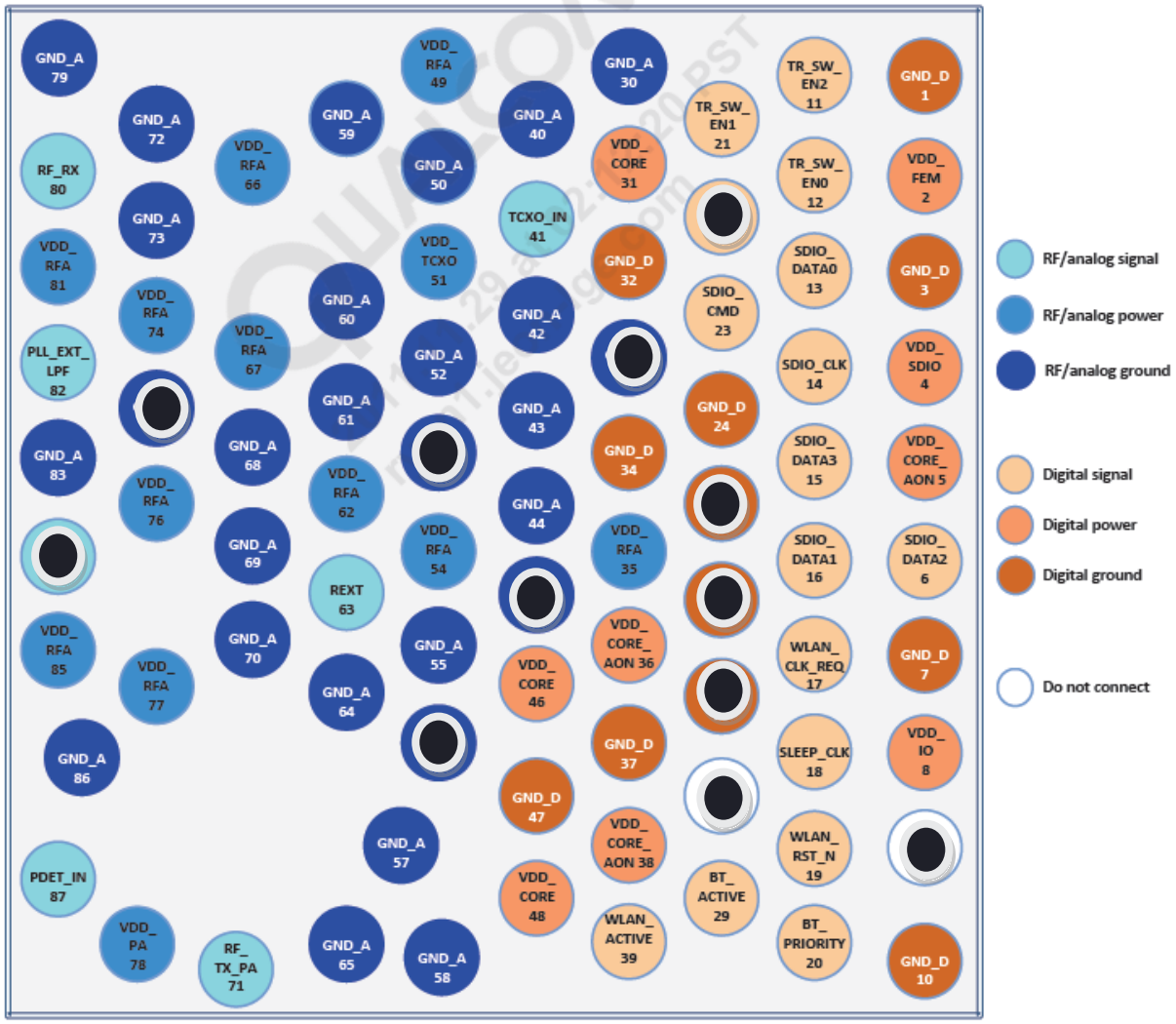
● NOT IN USE

U9000 – WCN2243 (BT/FM) (Top View)



WCN2243 IC pin assignments, top view

U9001 – WCN1314 (WiFi) (Top View)

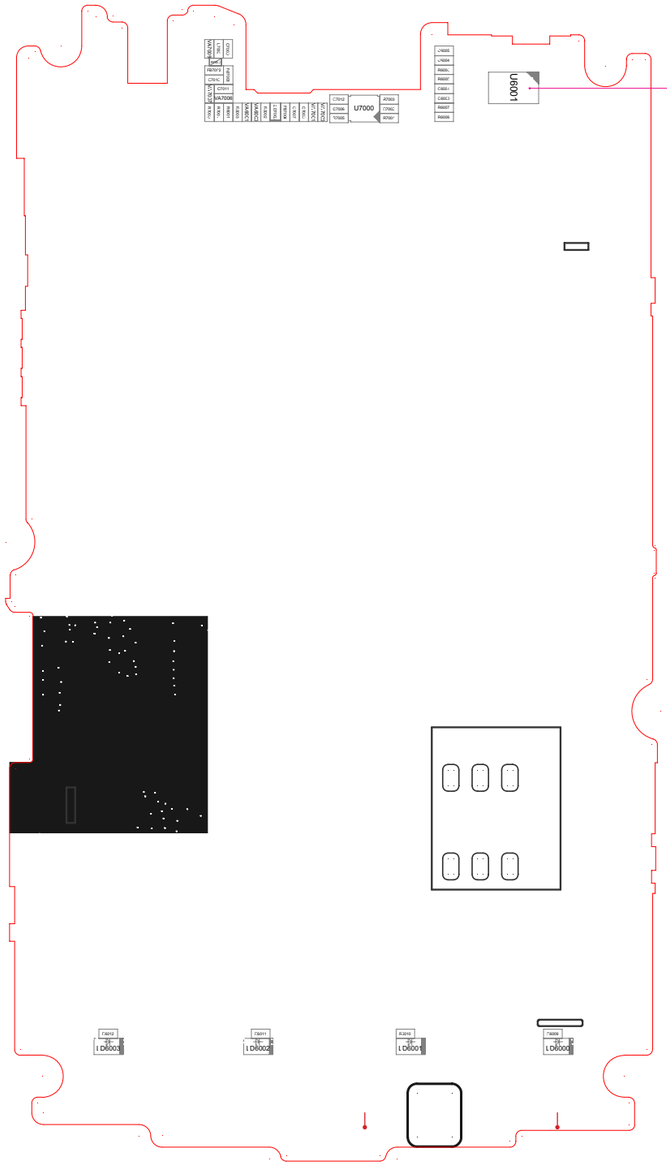


WCN1314 IC pin assignments (top view)

○ USE

● NOT IN USE

9. PCB LAYOUT



LG-E405_MAIN_1.0_TOP

U1002 : WCDMA PAM W2100
- No Tx power

FL1007 : Duplexer W850 Tx/Rx
- no service

U1003 : WCDMA PAM W850
- No Tx power

FL1002 : Duplexer W2100 Tx/Rx
- no service

U1001 : Transmit & Tx Module
- No Network service GSM
- No Tx Power

X200 : TCXO
- No Power On

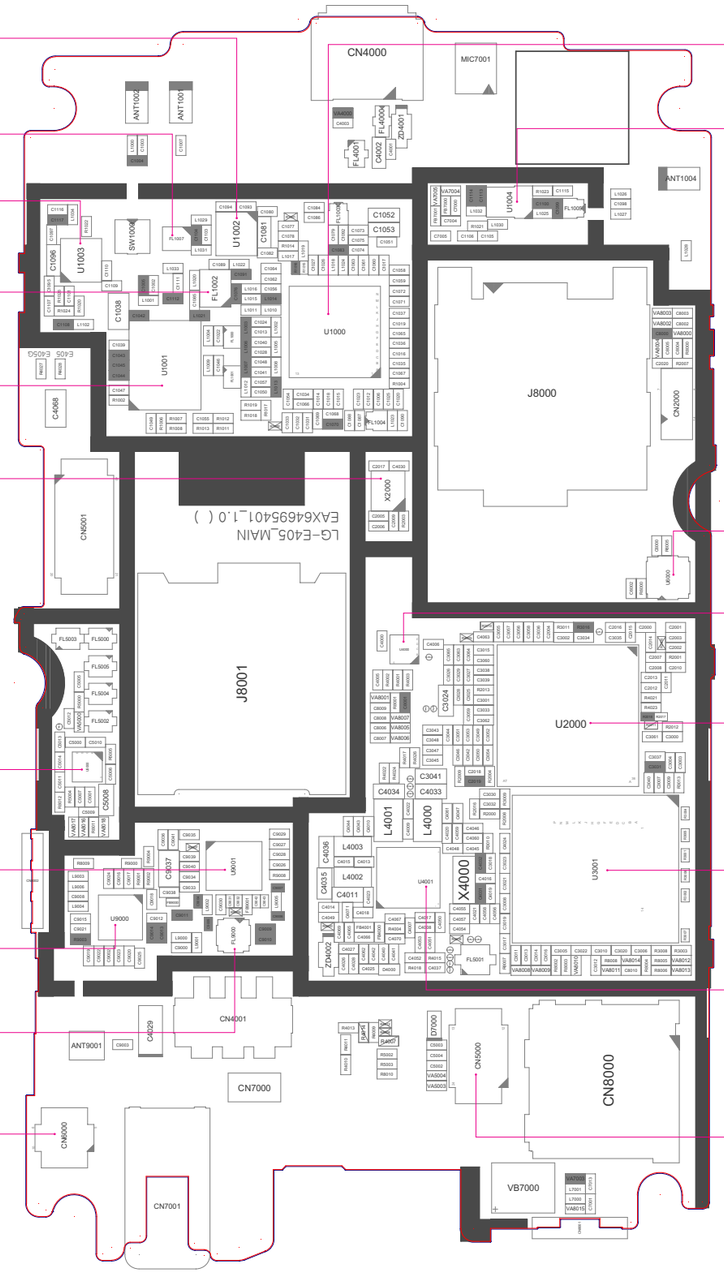
U5000 : Sub-PMIC
- No Display
- No Camera

U9001 : WIFI Module
- Can not use WIFI

U9000 : BT/FM Module
- Can not use BT, FM

FL9000 : Connectivity FEM
- Can not use BT, FM, WIFI

CN6000 : Touch Connector
- No Touch Function



U1000 : RF Transceiver
- No Network service

U1004 : GPS LNA filter
- No GPS Function

U6000 : Acceleration Sensor
- Can not use Motion Sense & Compass Function

U4000 : Mini ABB IC
- No USB Connection
- No charging

U2000 : MSMS7225A (Main chipset)
- No Boot / Reset, etc

U3001: Memory (MCP)
- No Boot / Reset, etc

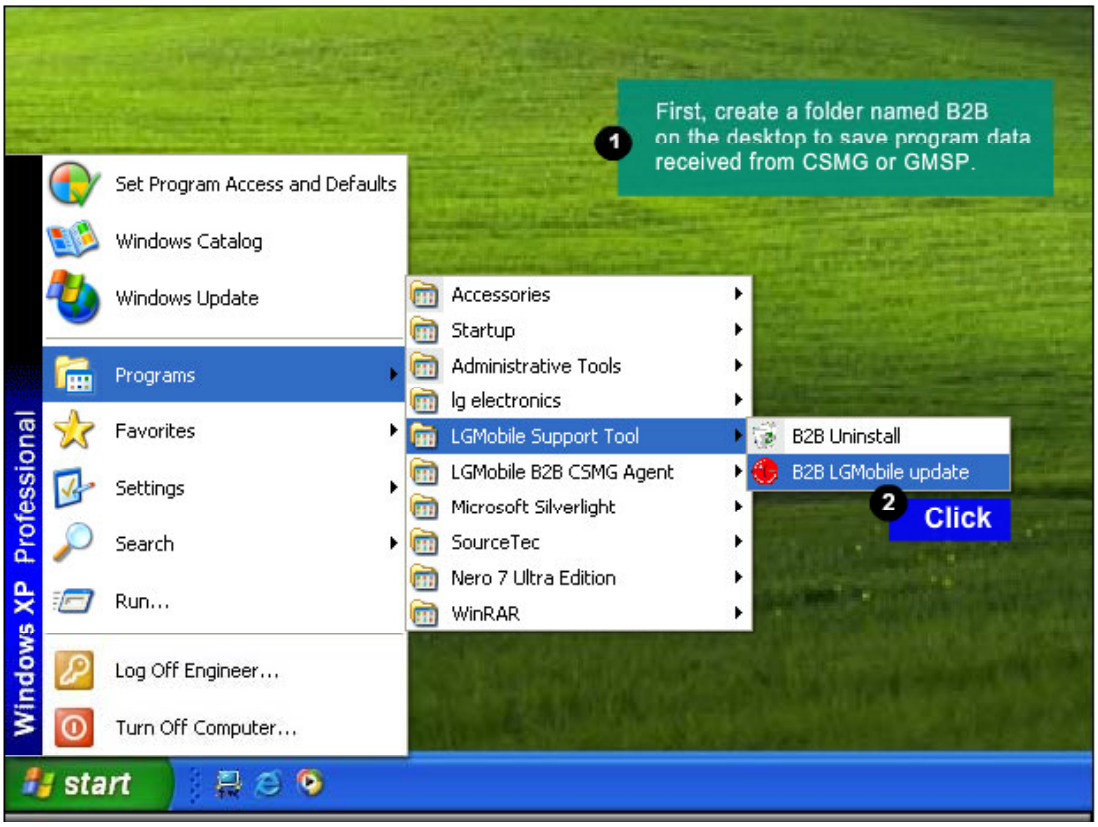
U4001: PMICNo Power on
- No Boot
- No Speaker/Headset Sound etc

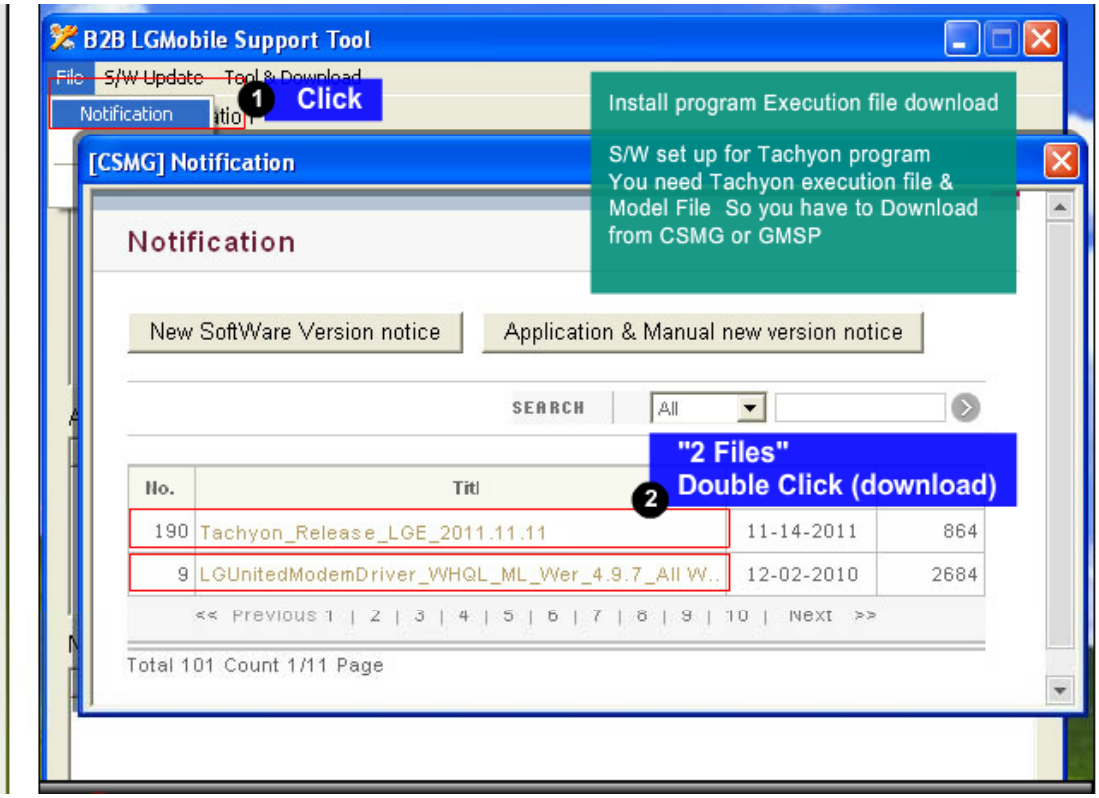
CN5000 : Camera Connector No Camera Function

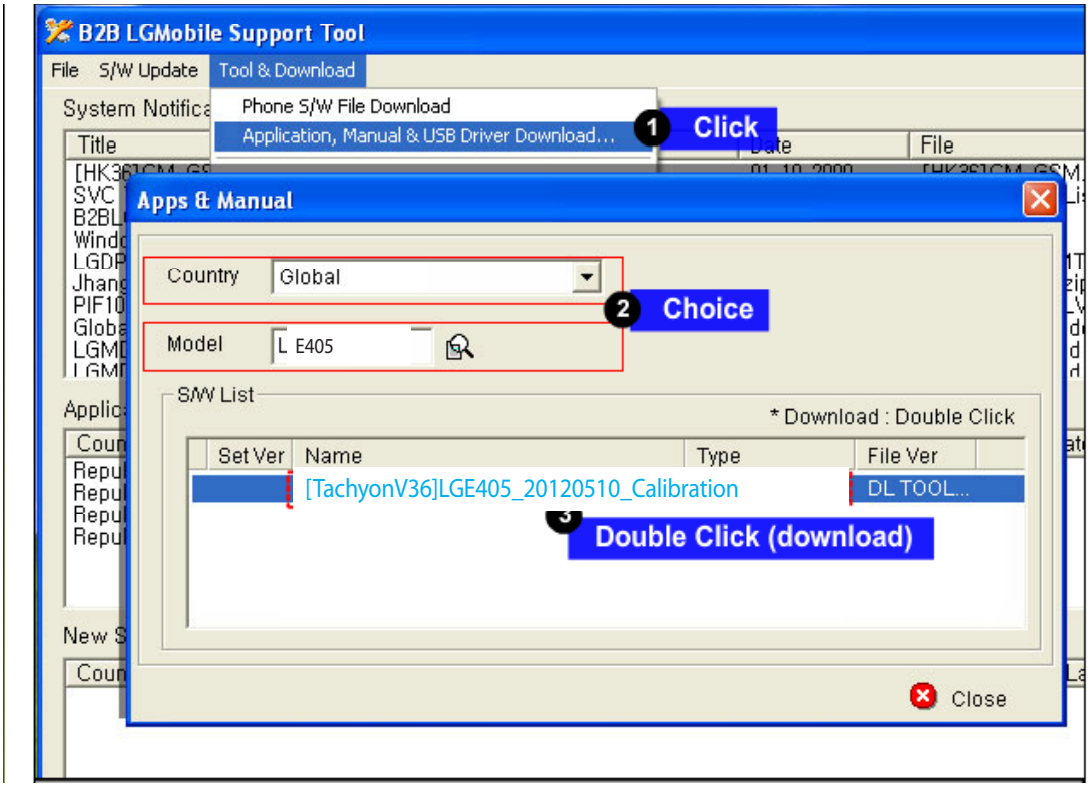
LG-E405_MAIN_1.0_BOT

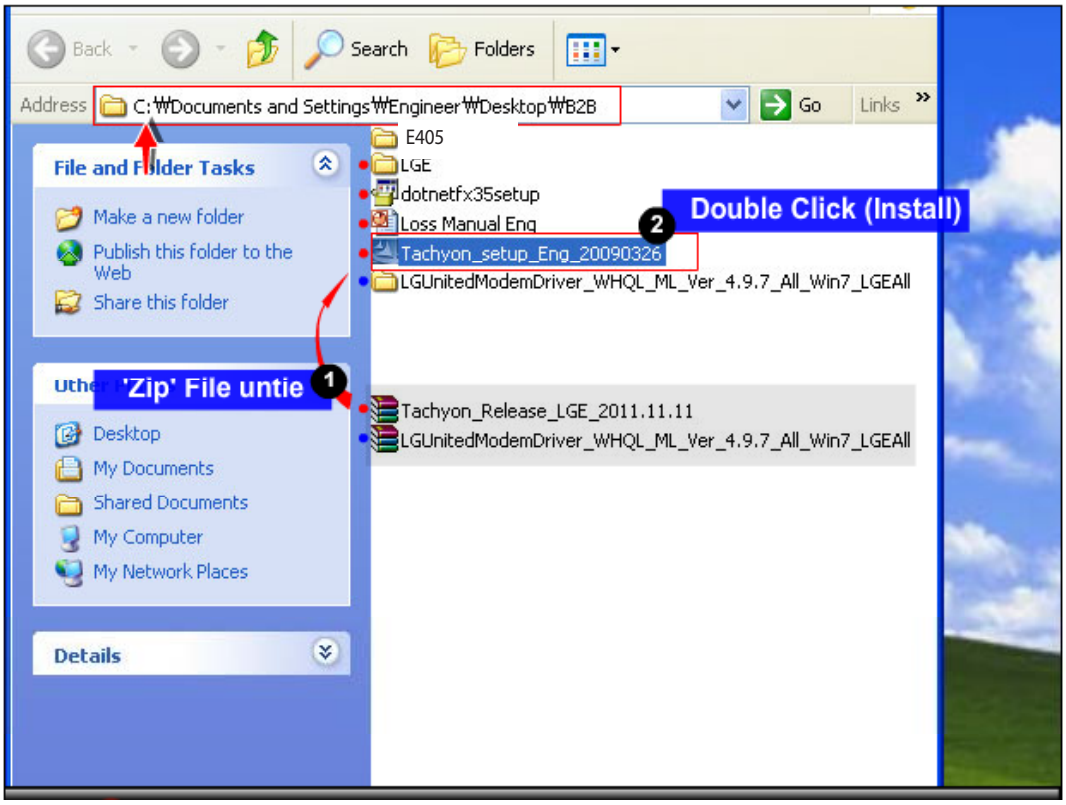
10. CALIBRATION

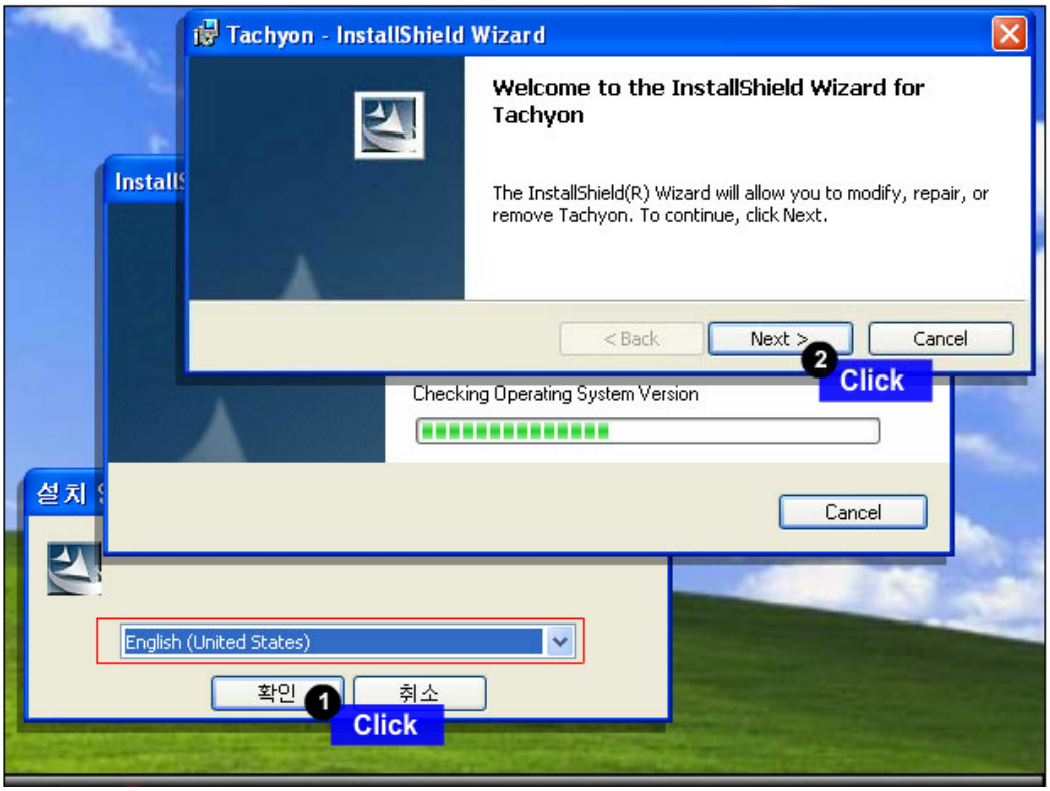
CAL INFORMATION		
S/W VERSION		
[TachyonV36]LGE405_20120510_Calibration		
Please Check the Version to "B2B"		
H/W		
	Name	**Part No.**
PIF	PIF200(All Type)	BJAY0024021
USB Cable	USB Cable	RAD32247898
Power Cable	DC Power Cable	RAD32247878
I/O Cable	5P E-SATA_DC_Plug	RAD32167861
RF Cable_Main	MS-156C	BJAY0024004
Power Supply_PIF	Power Supply 5.3V	
Power Supply_Phone	Power Supply 5.0V	
RF Test Equipment	E5515C(8960)	

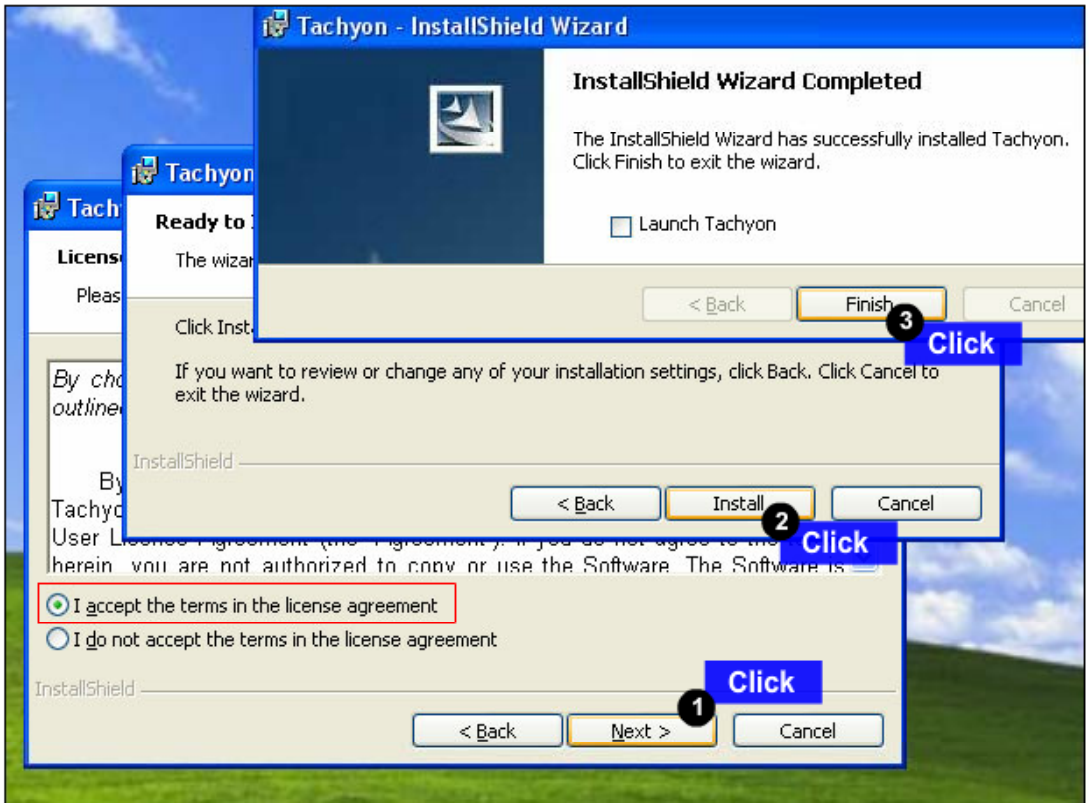


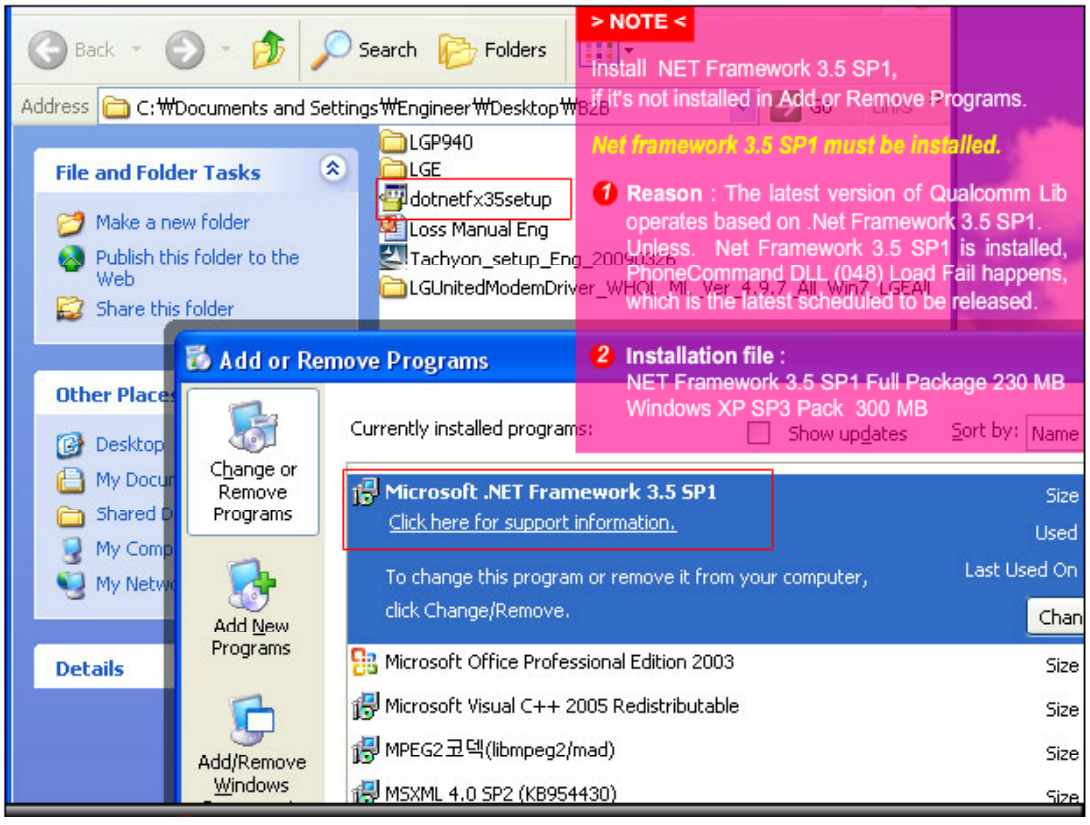


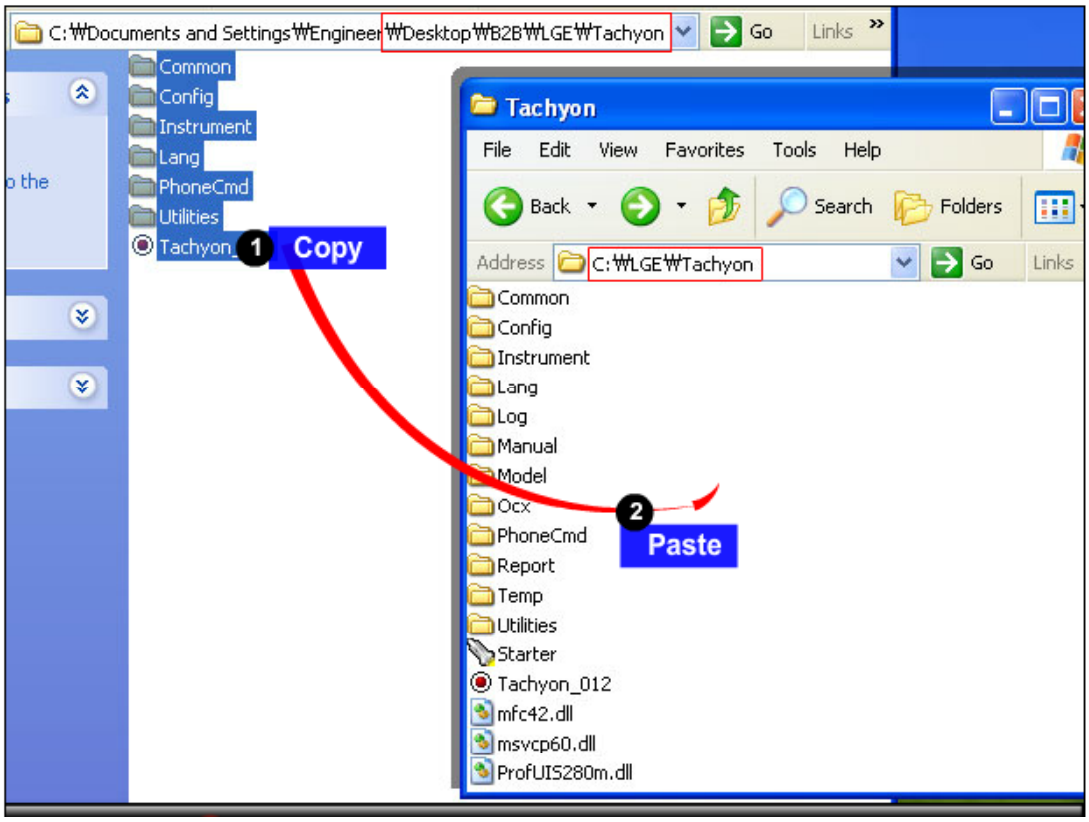


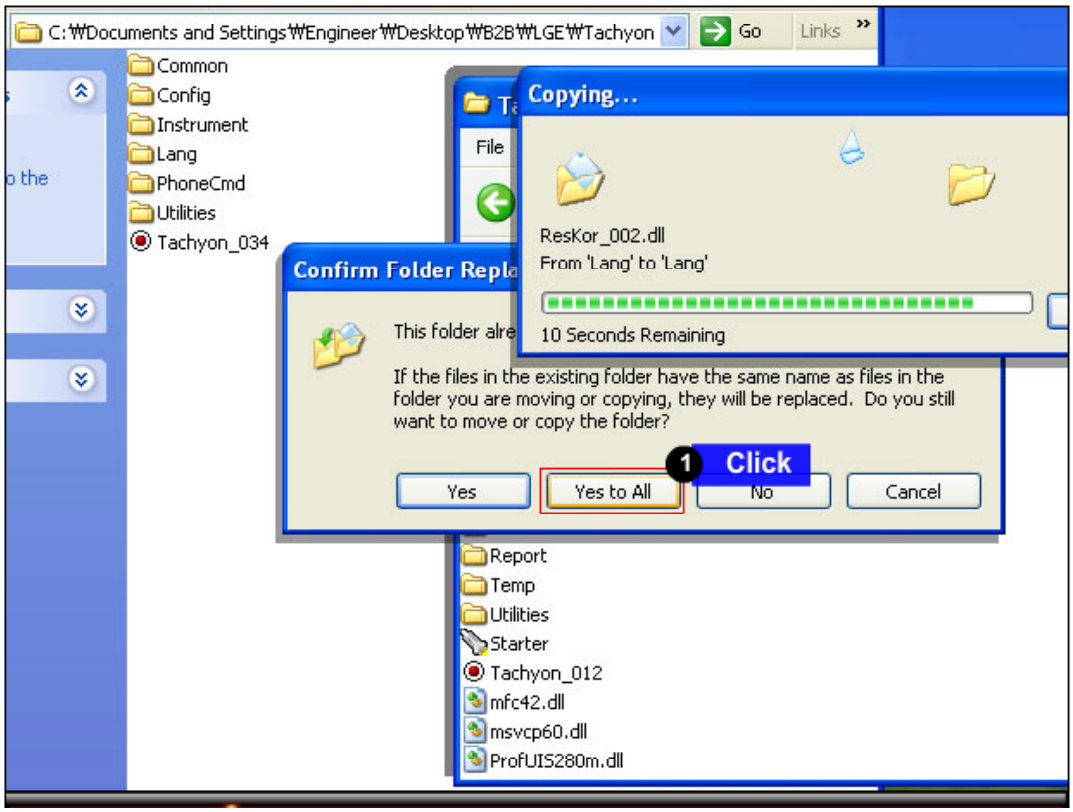


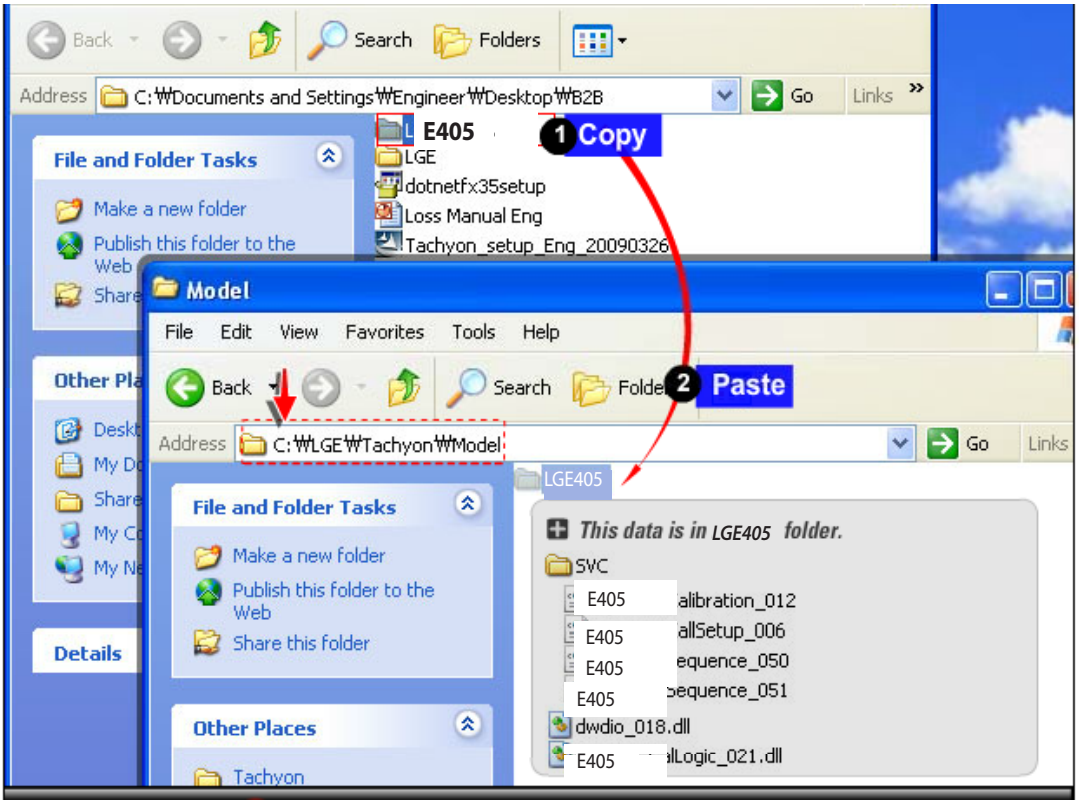


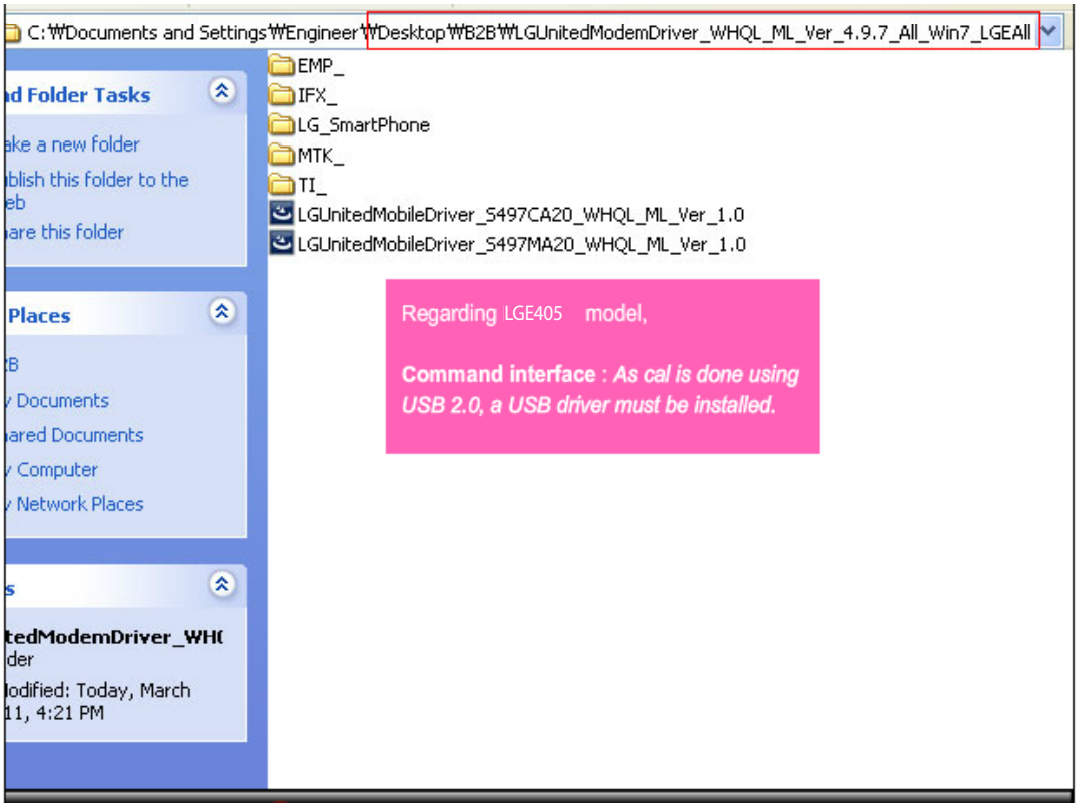


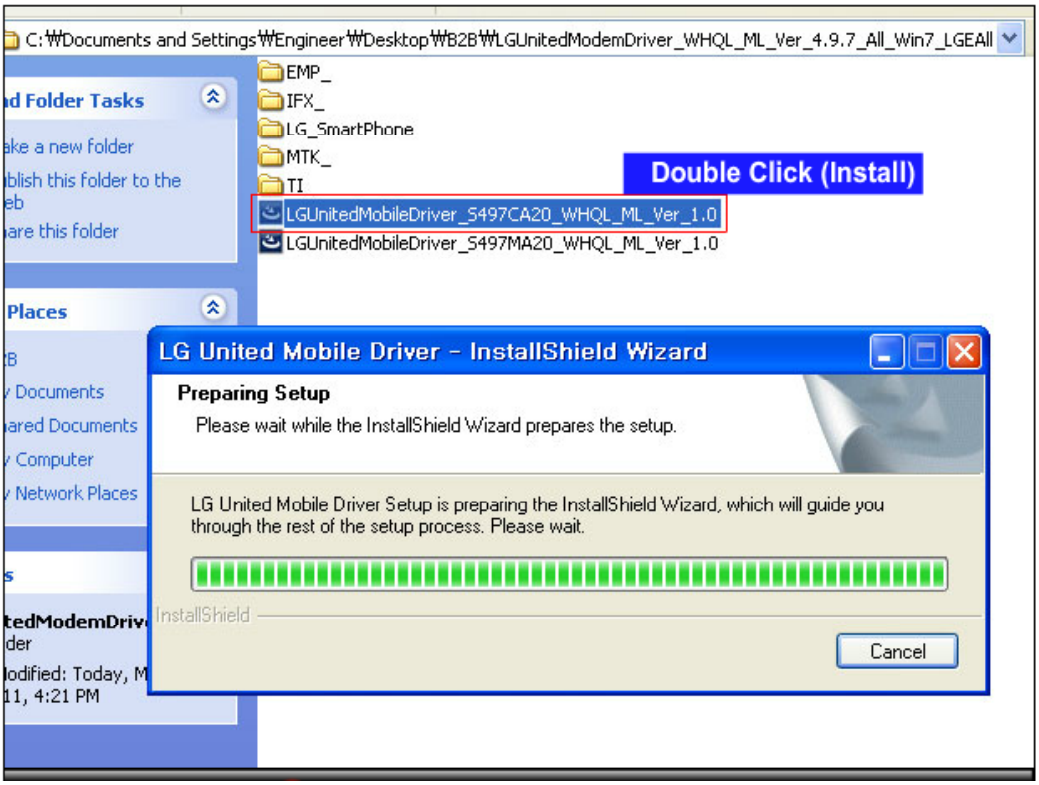


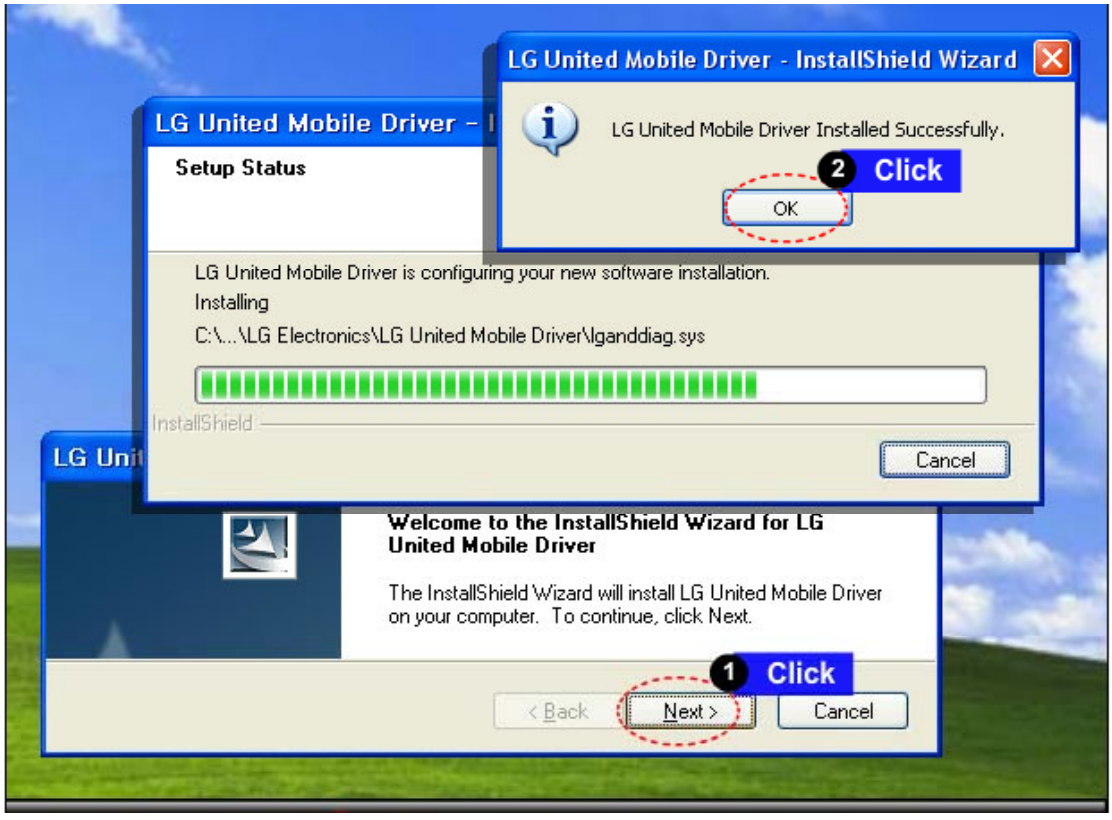


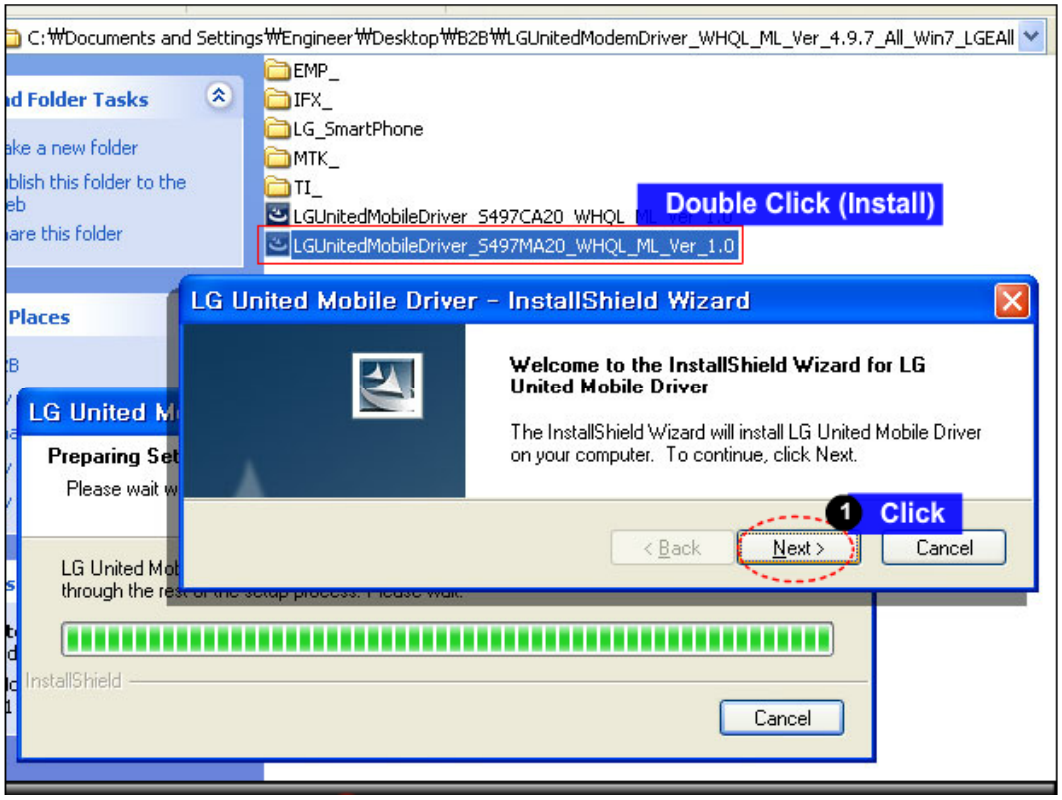


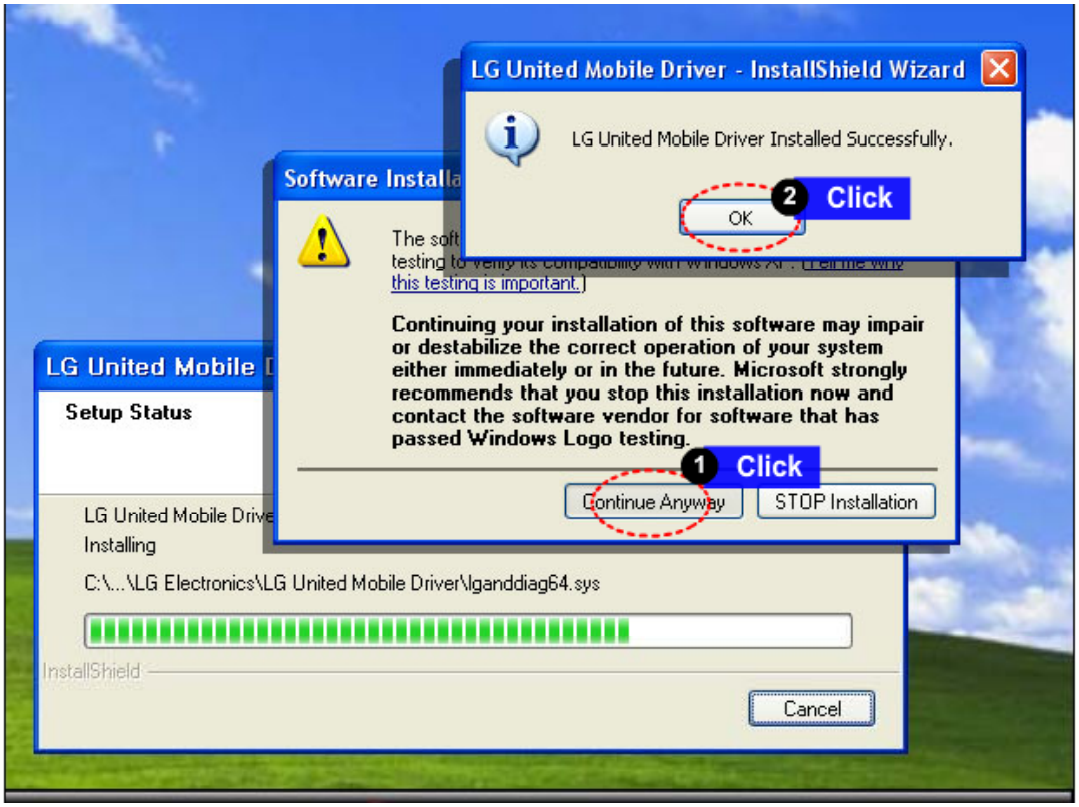


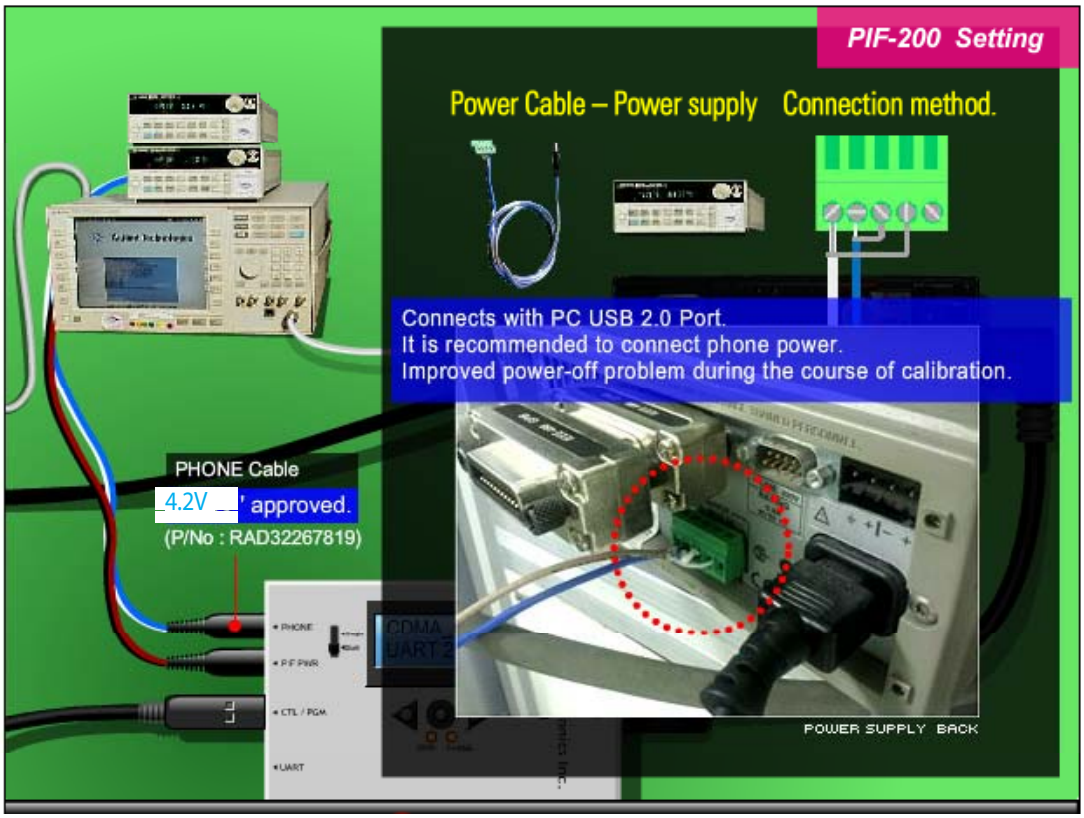


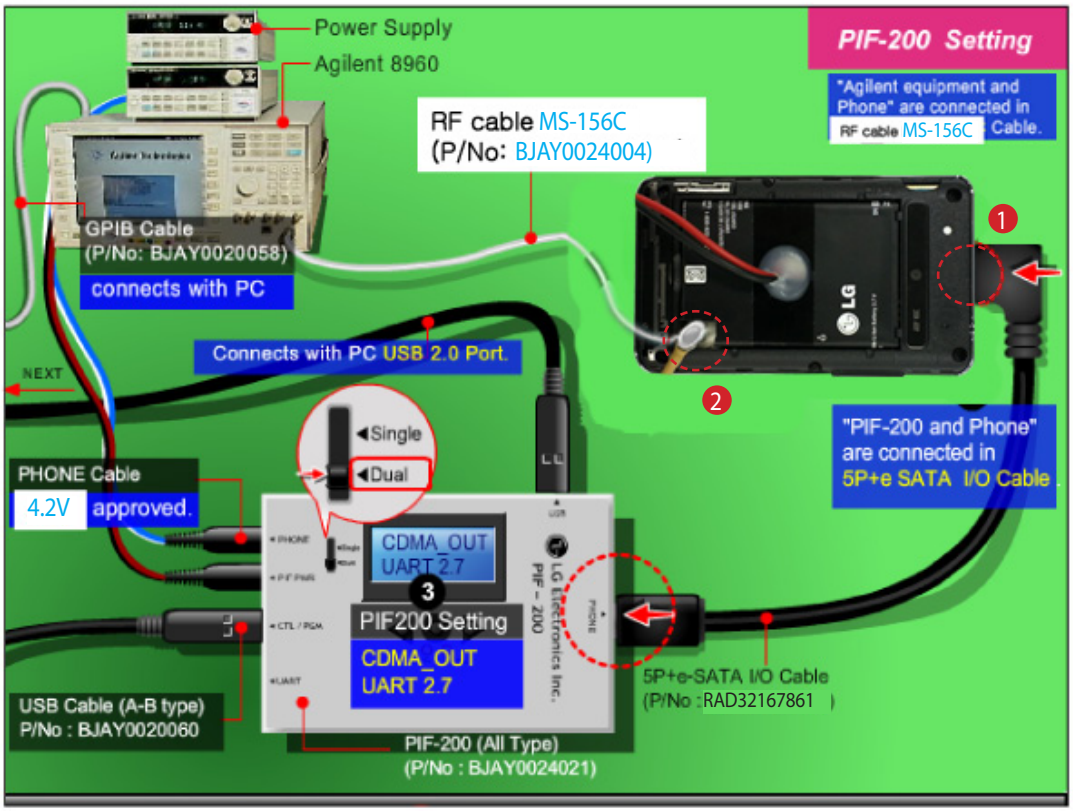


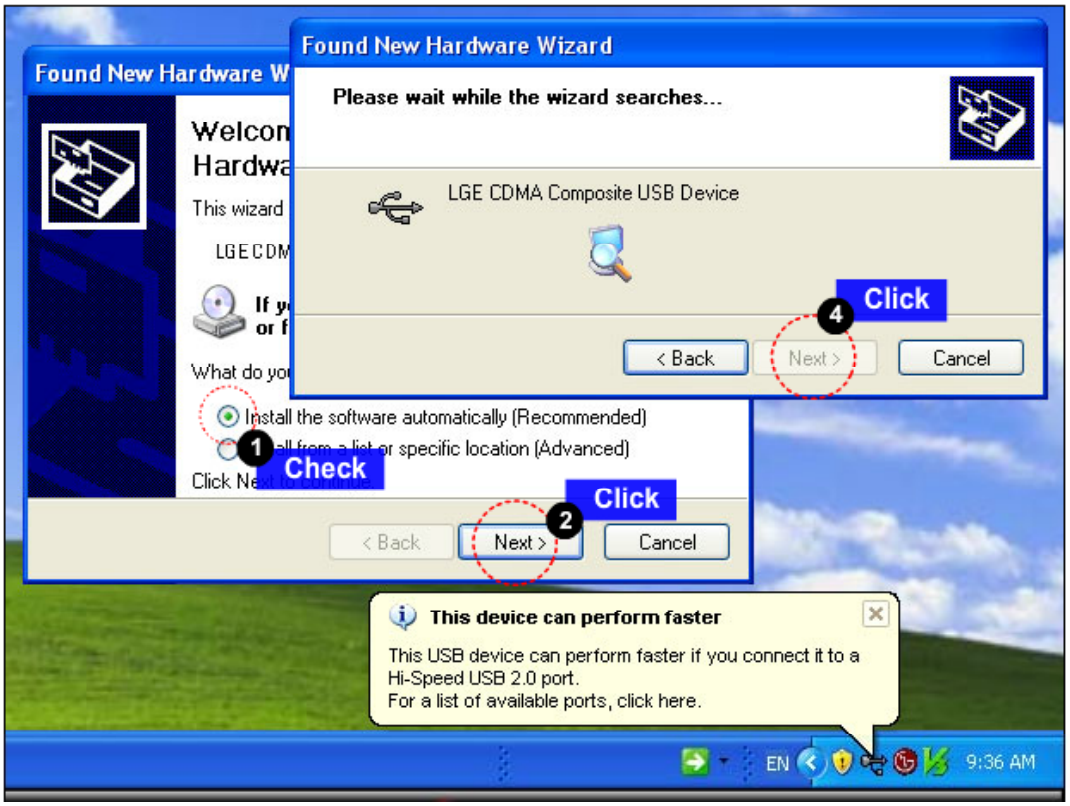


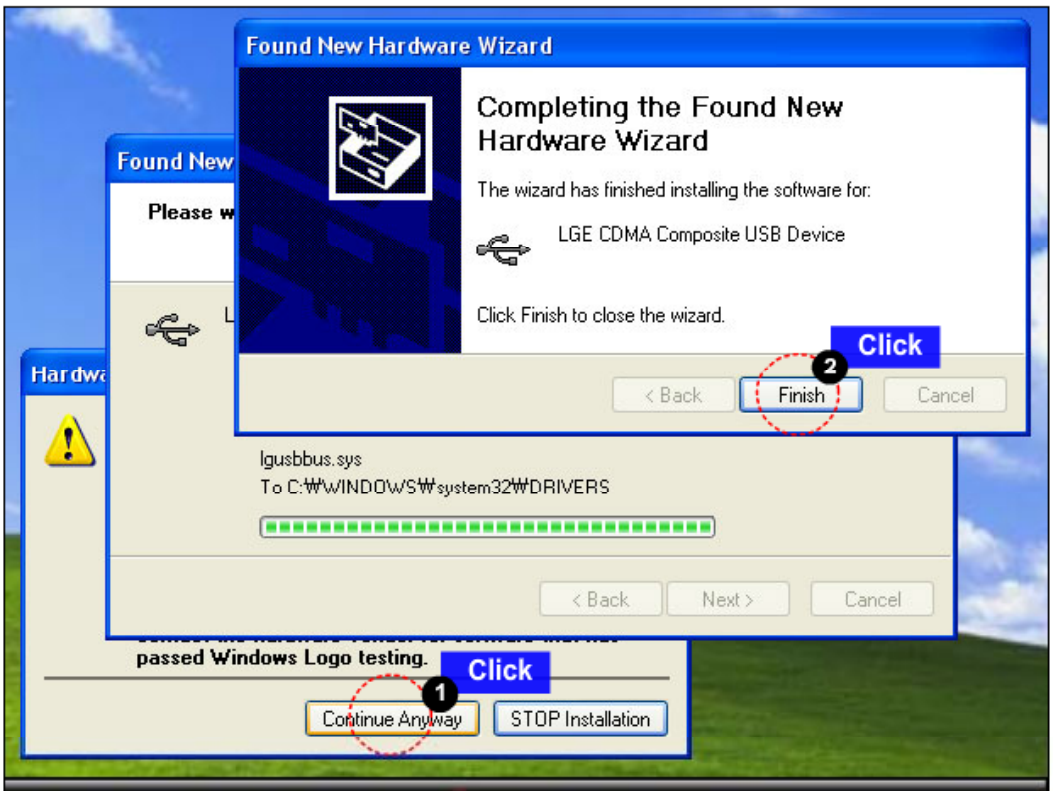


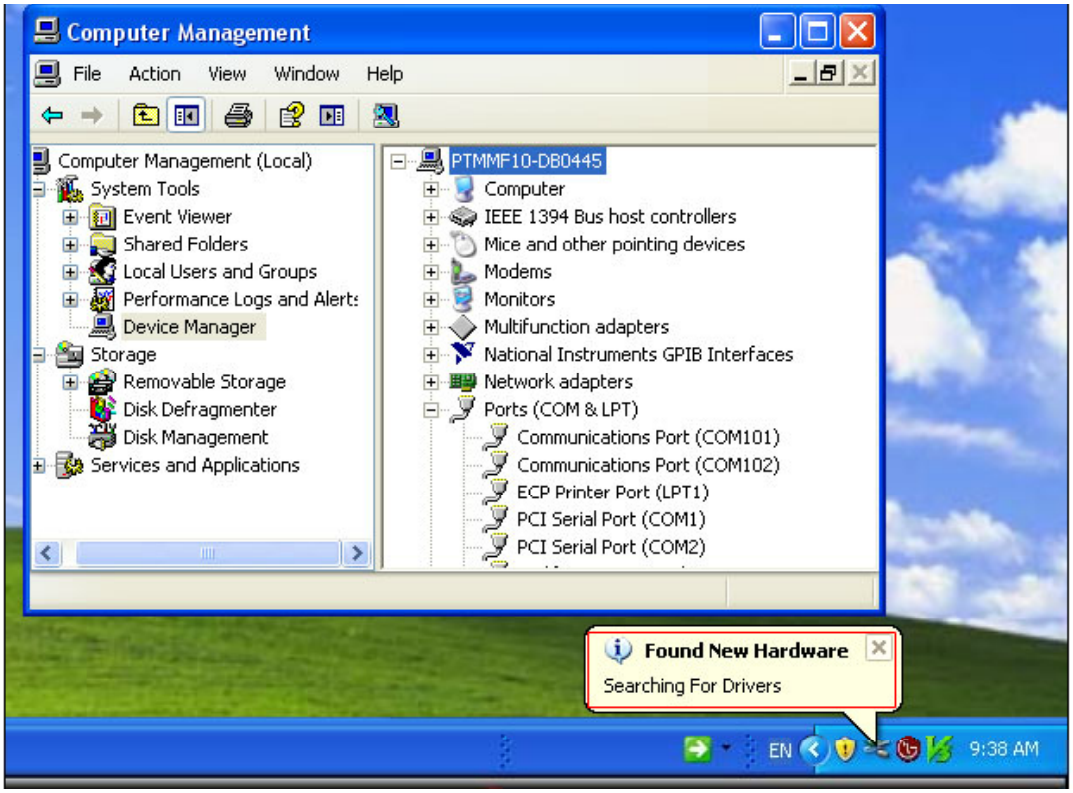


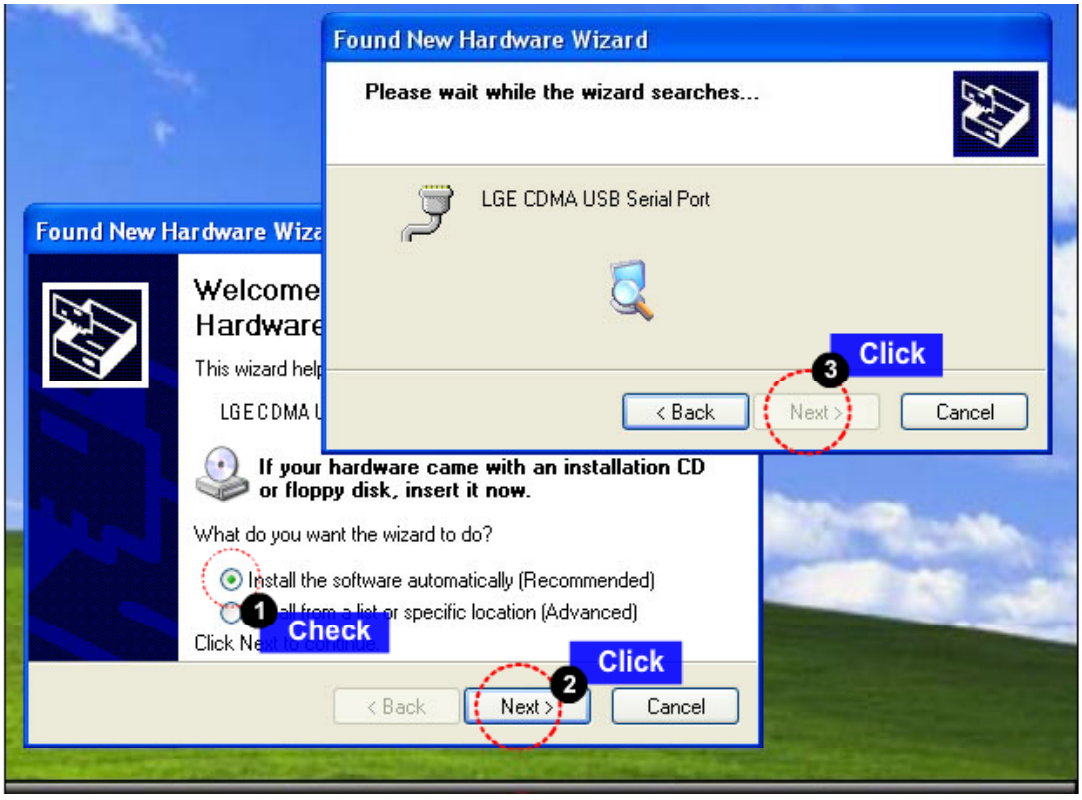


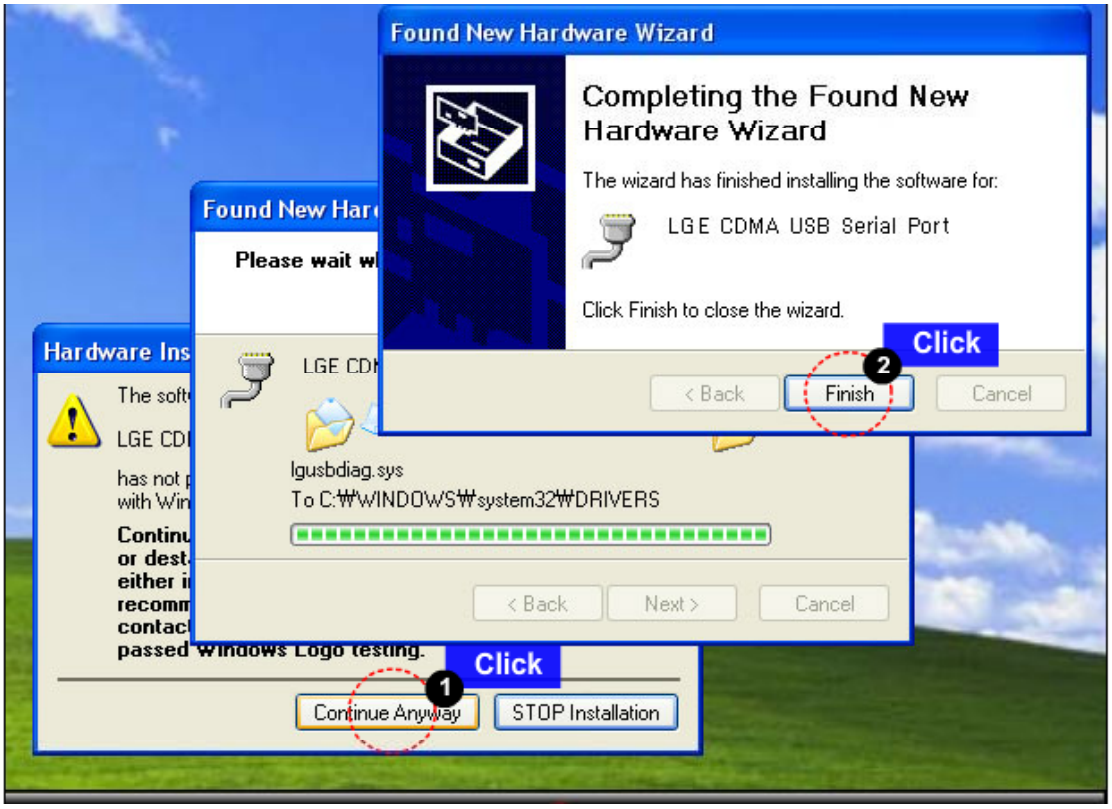


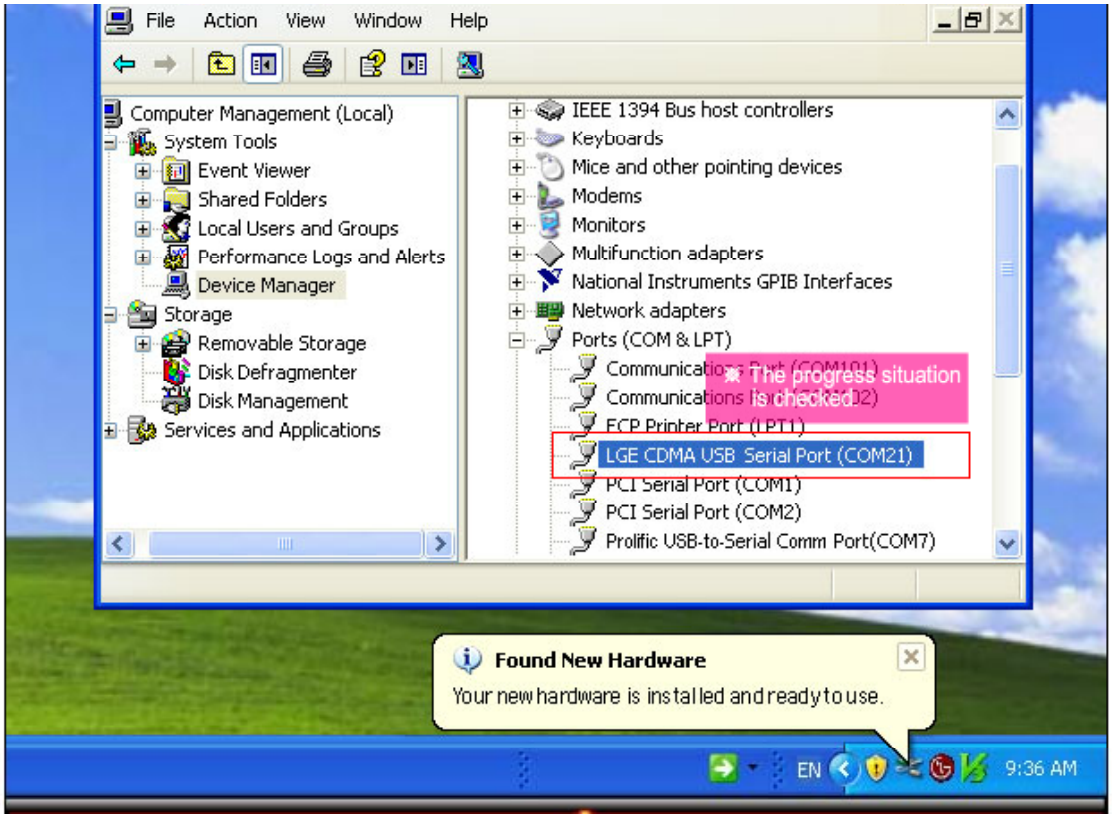


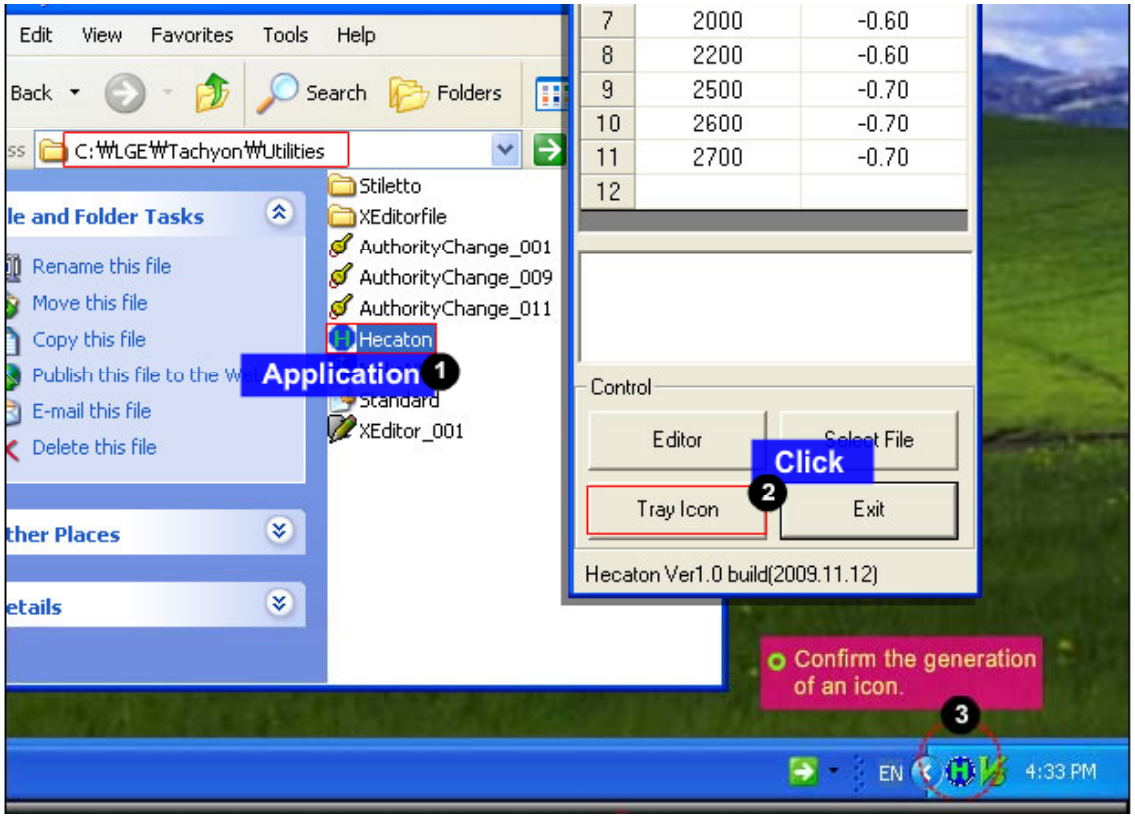


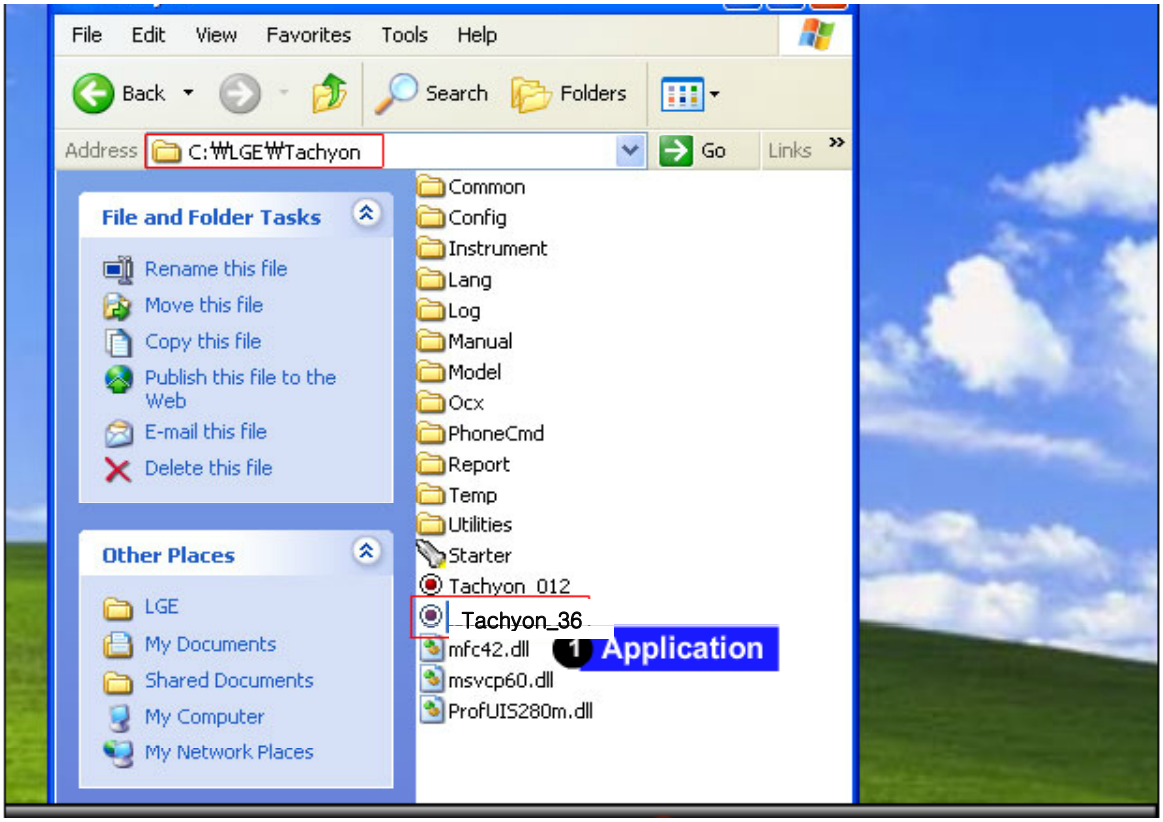


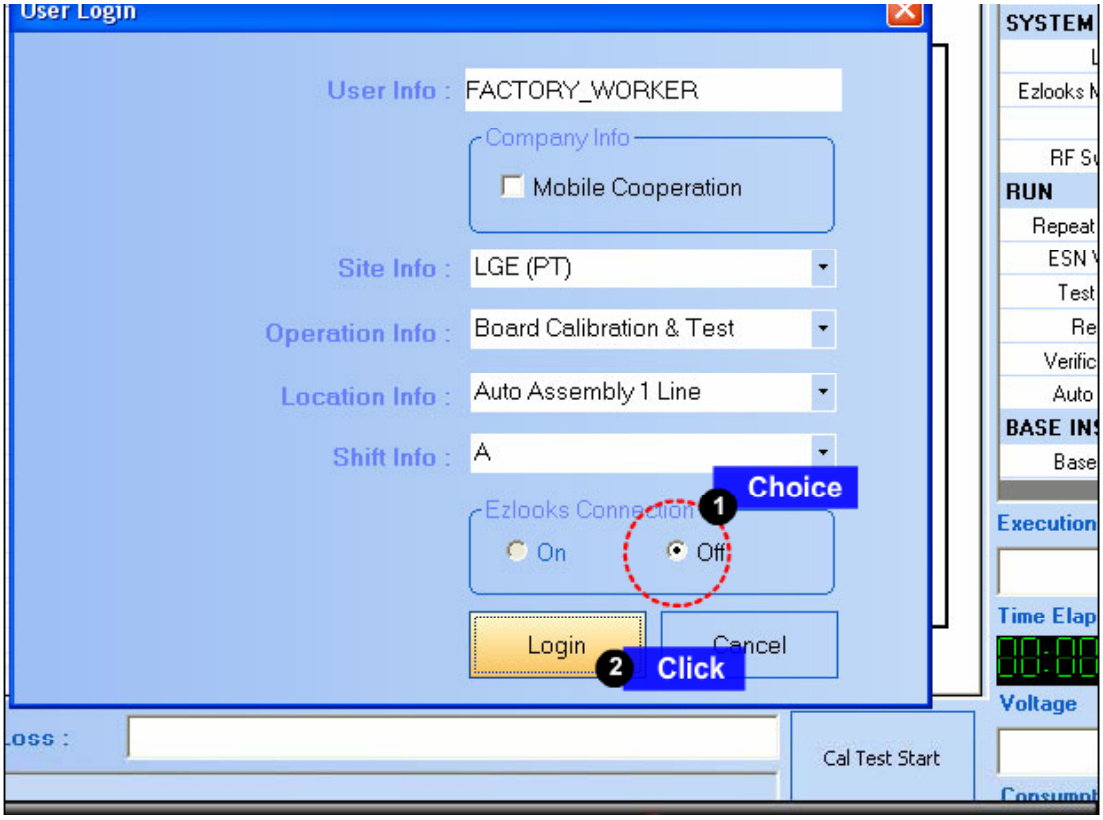


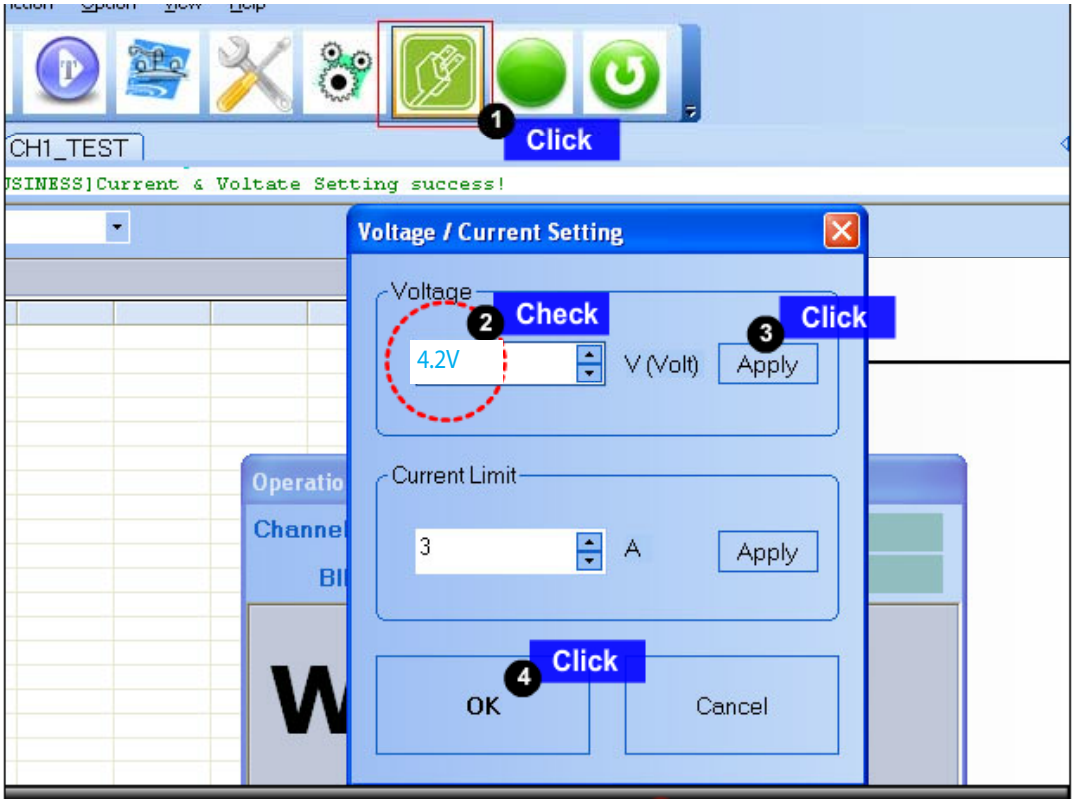


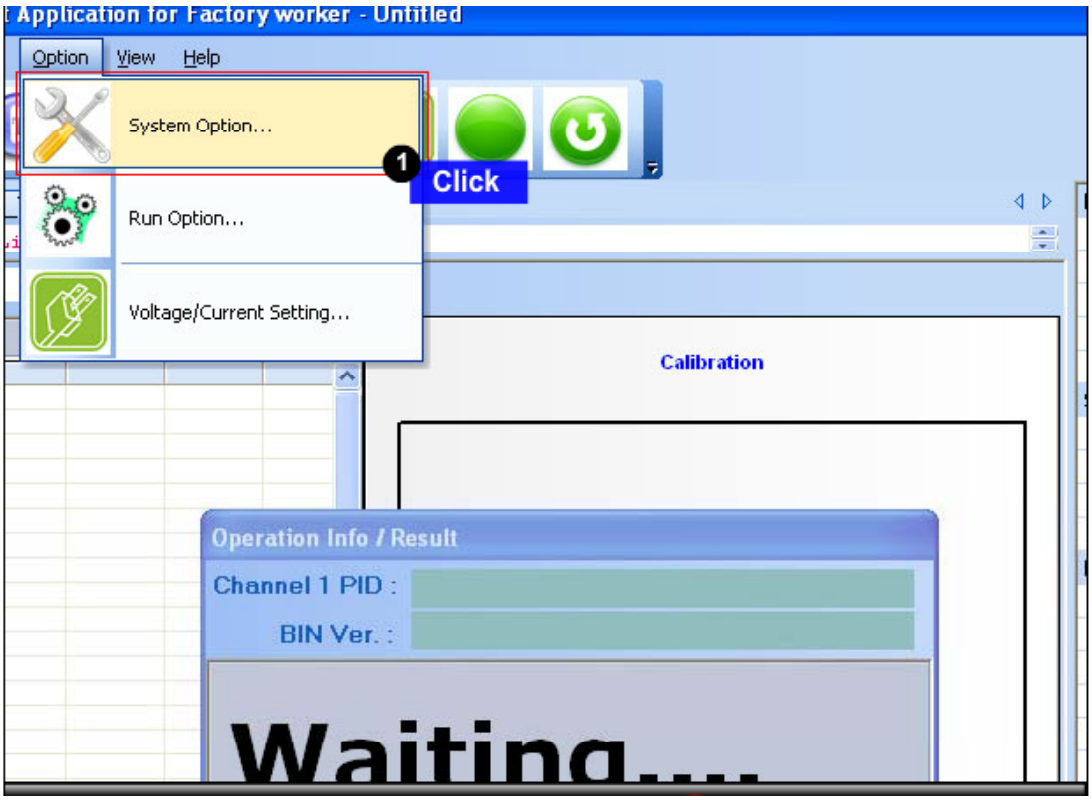


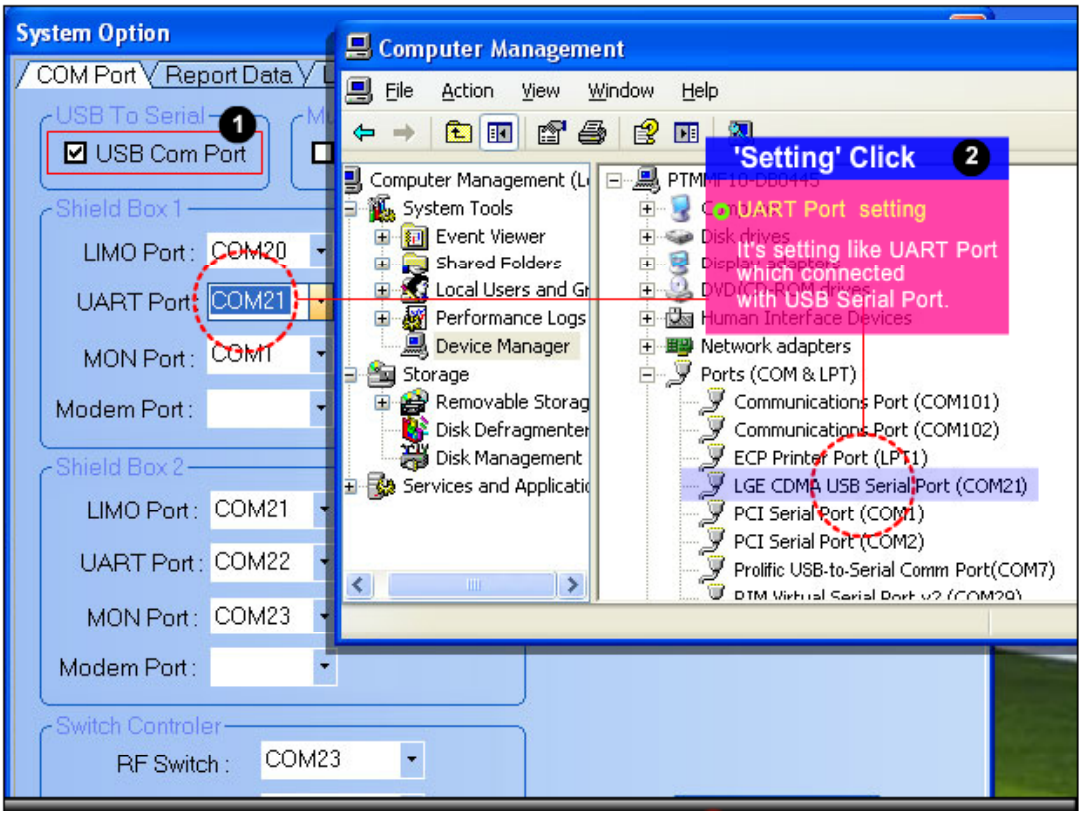


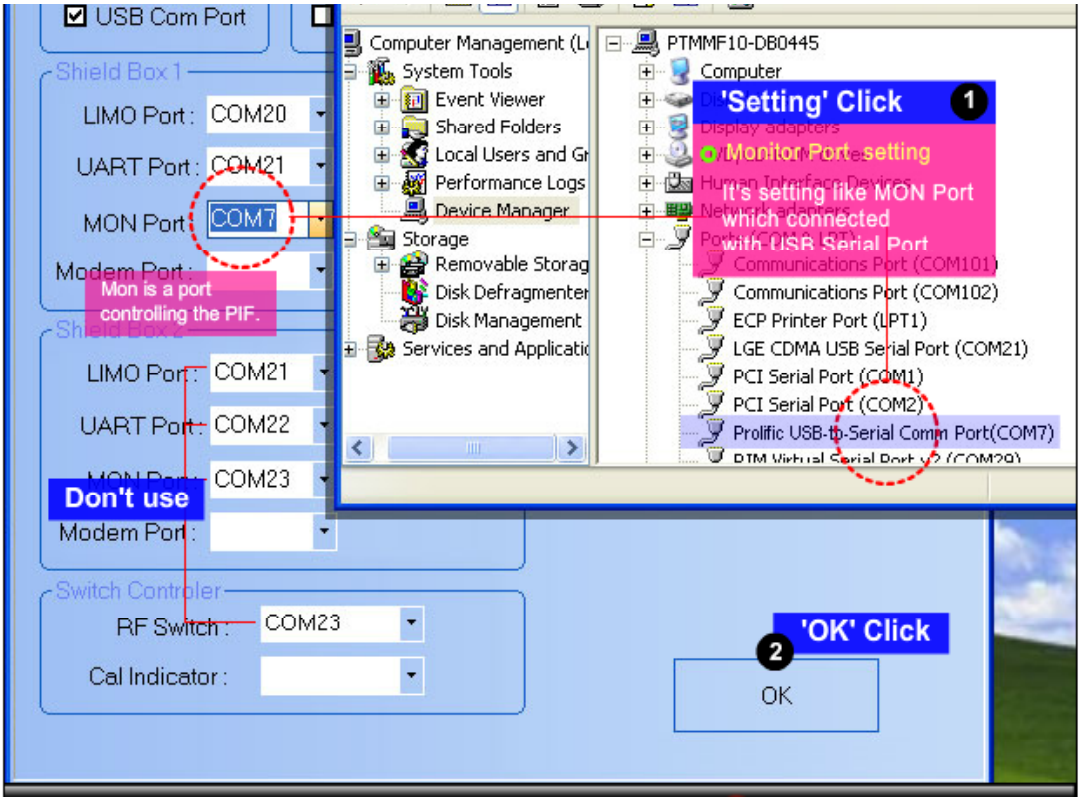


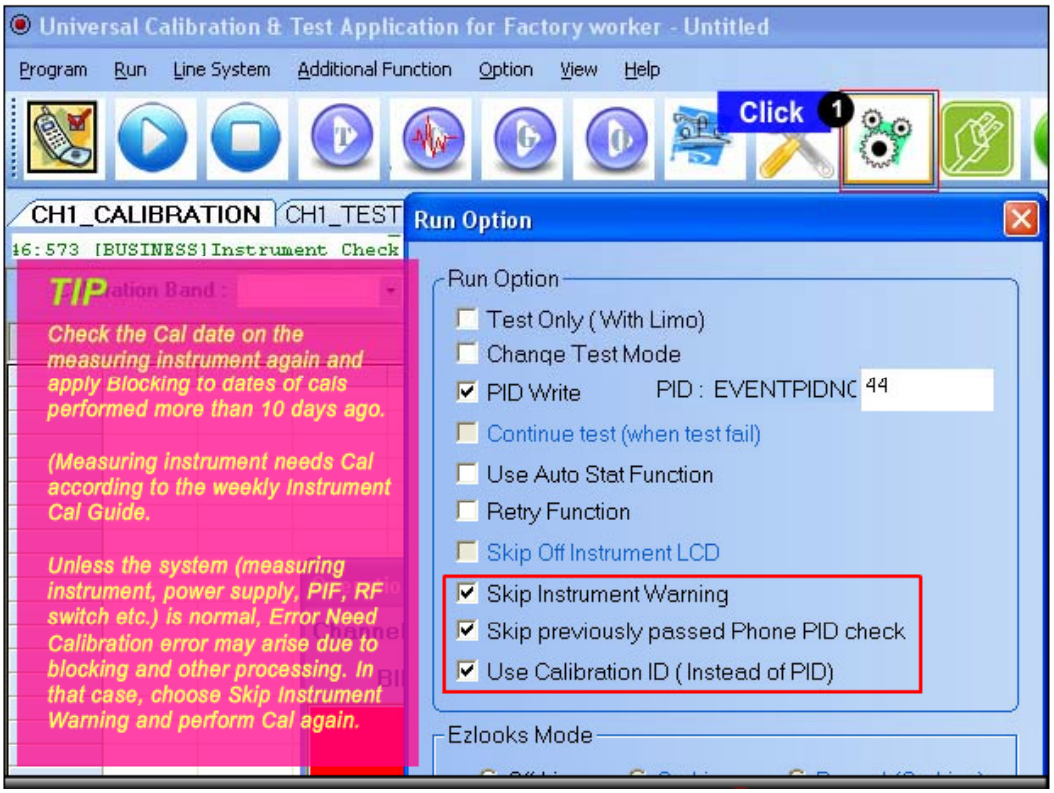


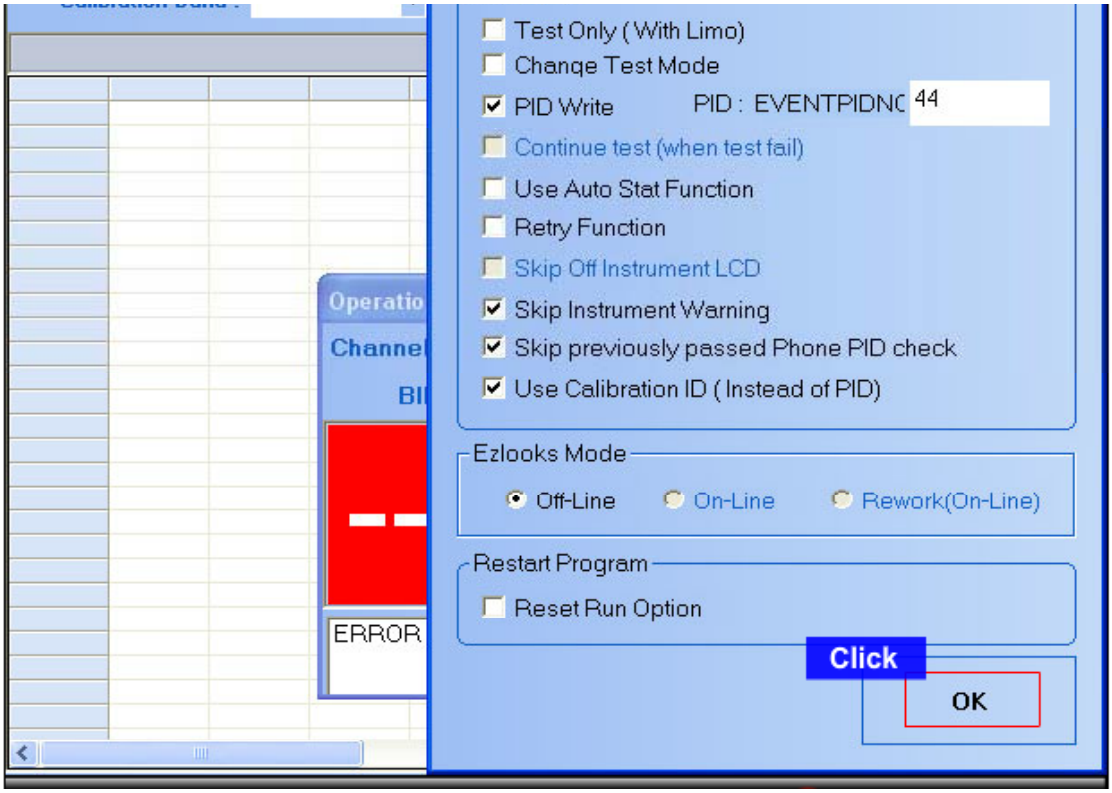


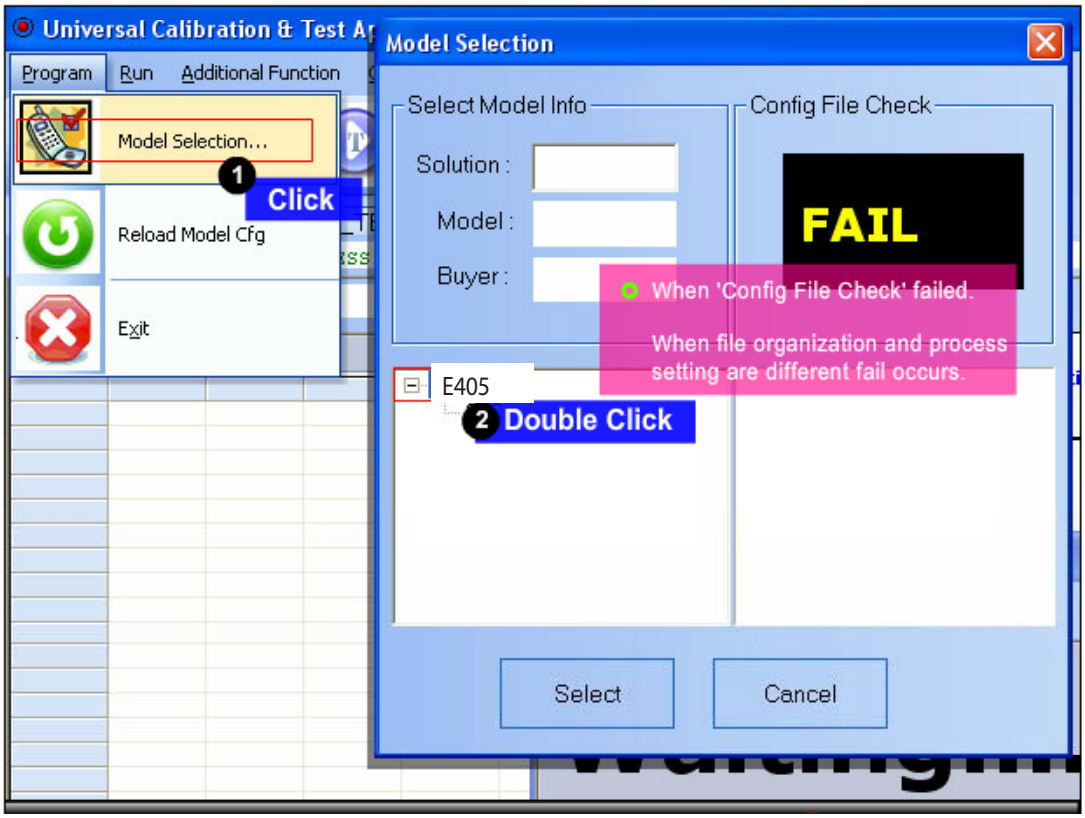


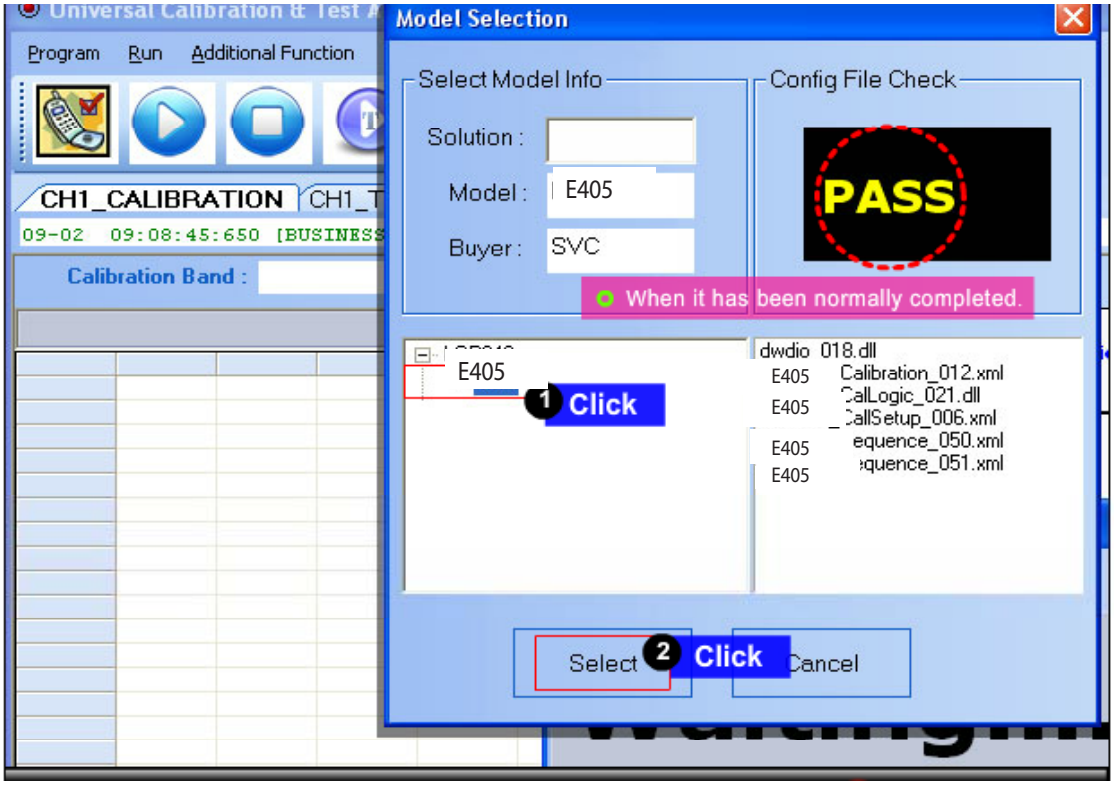


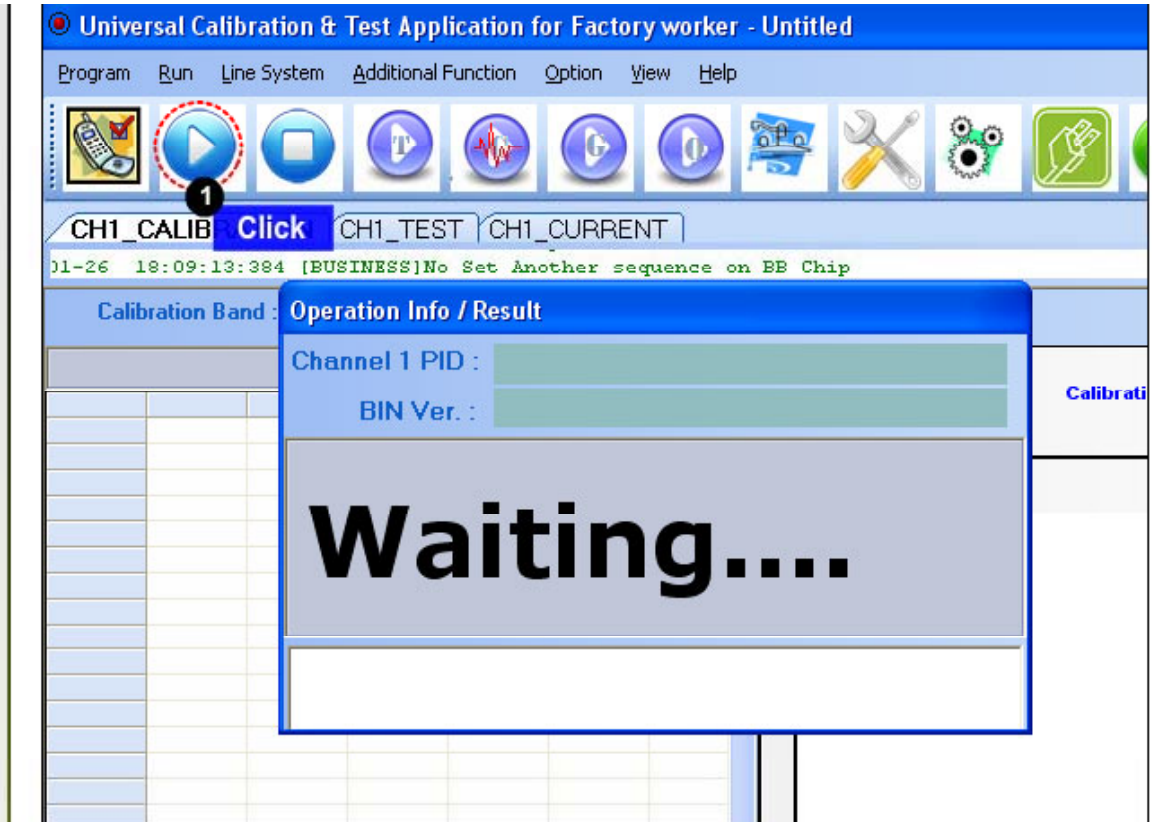


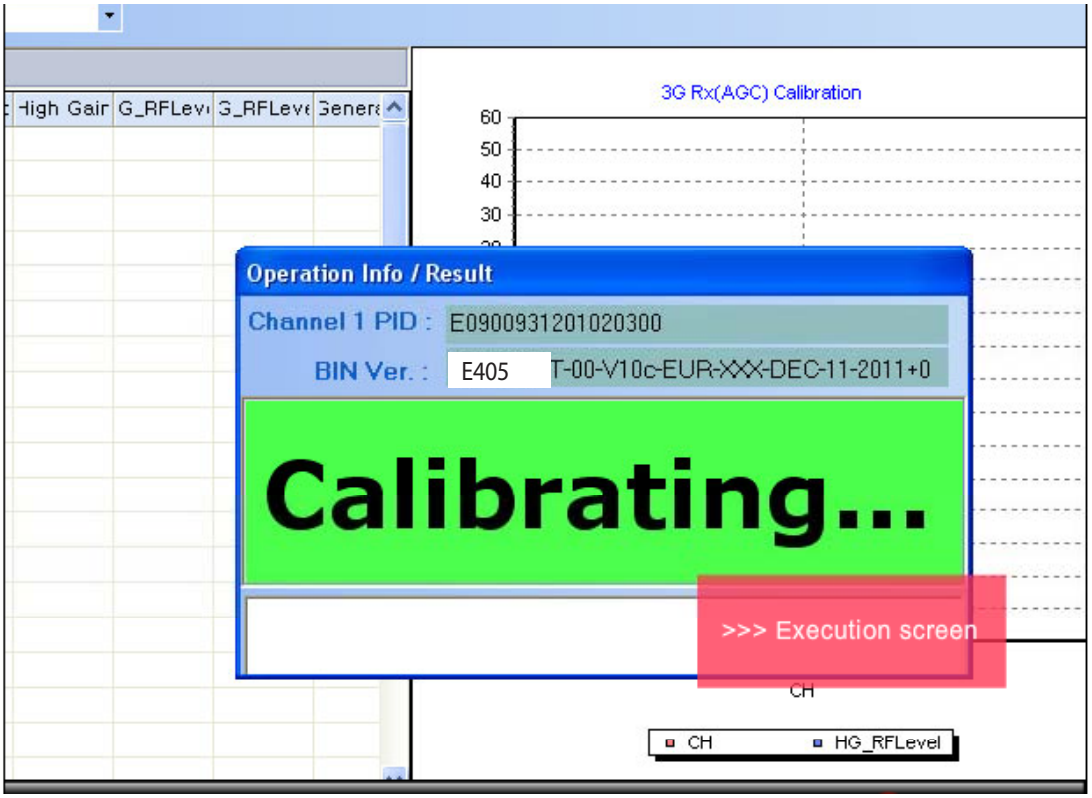


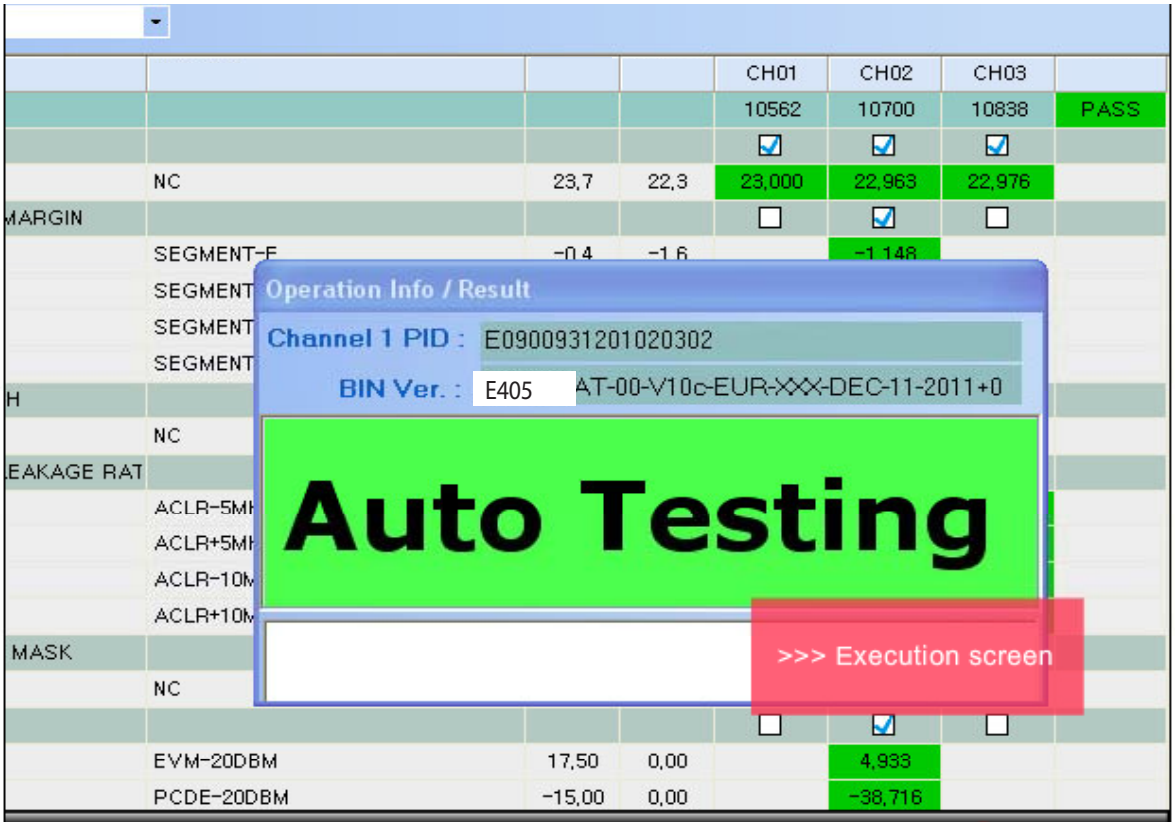


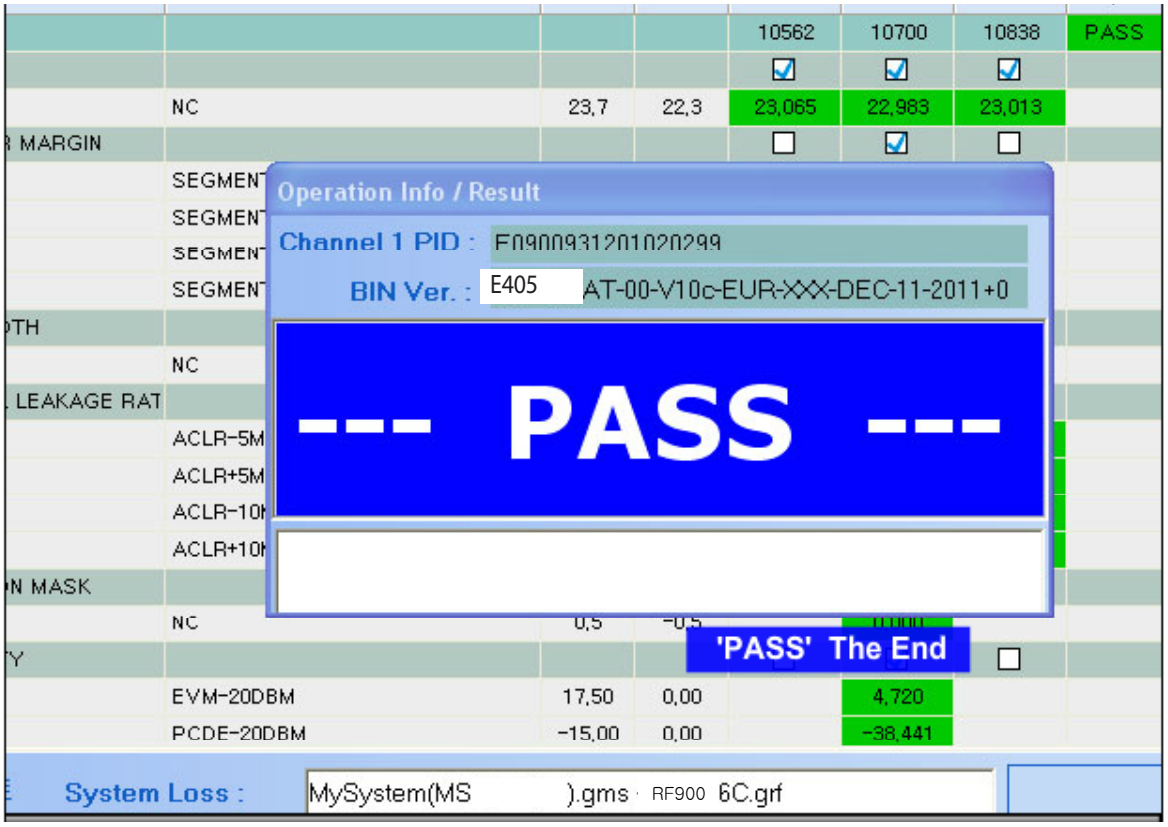




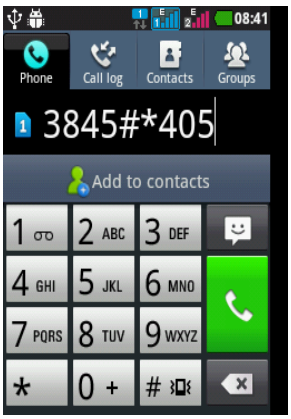
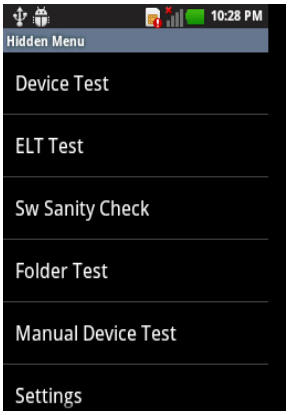


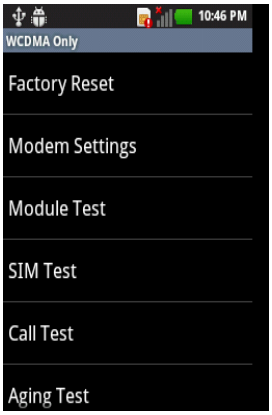






11. HIDDEN MENU

	**Hidden Menu Start** Start shortcut keys: 3845#*405#
	**Hidden Menu** Start the desired menu: Menu, click
	**Version Info** Classified Information representation -> Hidden Menu -> Settings -> Version Info



Factory Reset

Format SD Card : SD Card Data reset

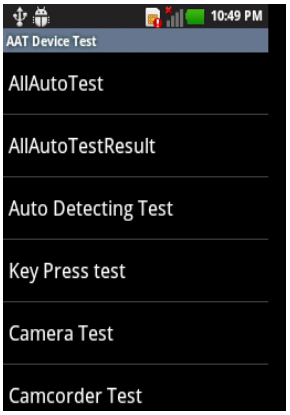
Factory Reset : Reset as default Factory Settings

Delete Userdata : Disabled

-> Hidden menu

-> WCDMA-Only

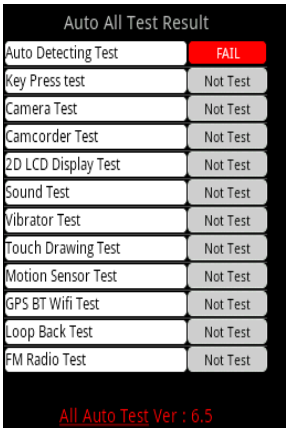
-> Factory Reset



AAT Device Test

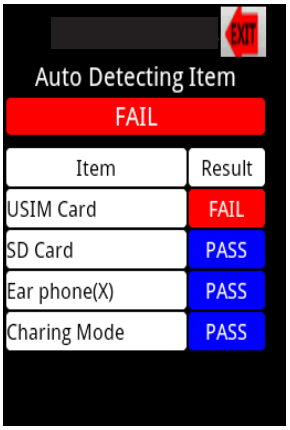
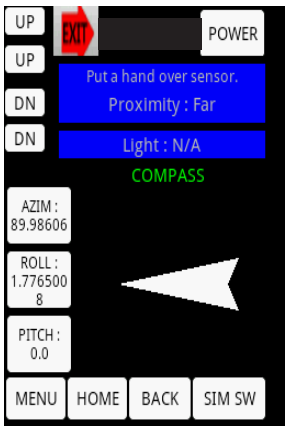
Allauto Test :

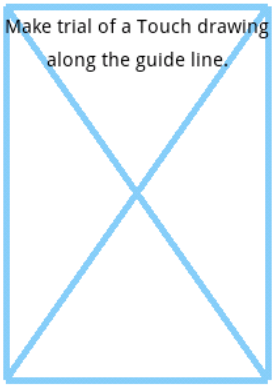
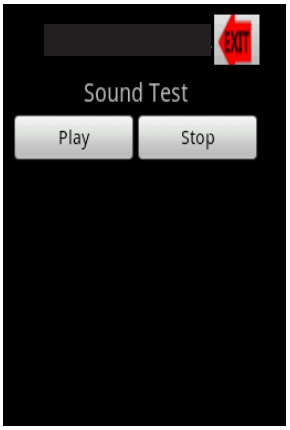
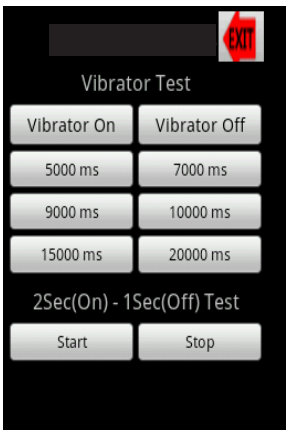
-> You can test all functions automatically

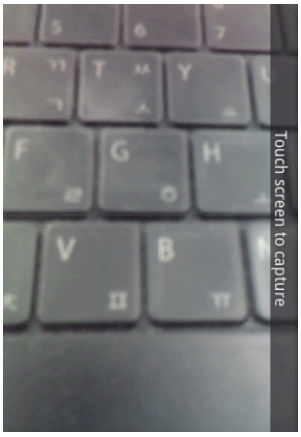
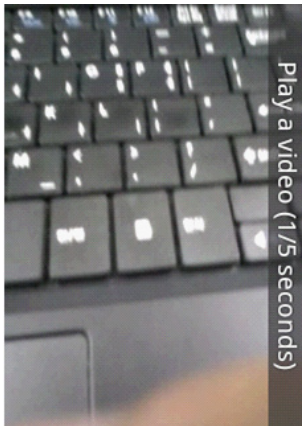
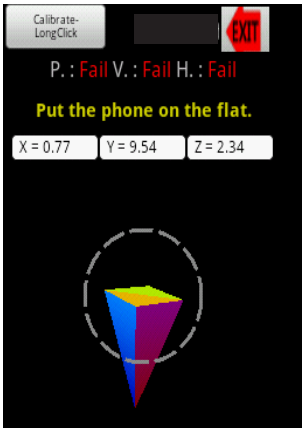


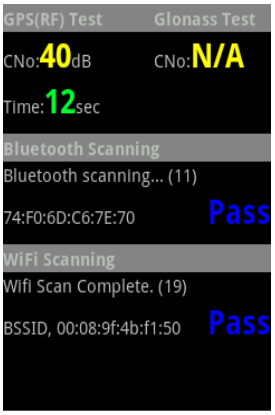
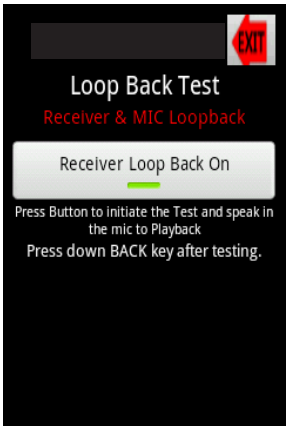
Auto All Test Result

-> You can check Test Results

	**Auto Detecting Item** Check below Items ->USIM Card : connecting both SIMs is PASS -> SD Card : connecting is PASS -> Ear Phone : No connecting is PASS -> Charging Mode : connecting is PASS
	**2D LCD Display Test** Check Black & White Color
	**Key Press Test** Check below Items Up/Down key : Hard Key Power key : Hard Key Menu key : Touch Key Home key : Touch Key Back key : Touch Key SIM switch key : Touch Key Compass Sensor : Check North Proximity Sensor : Bilnd the Proximity sensor

	**Touch Drawing Test** Draw a guide line
	**Sound Test** Touch the "Play" icon
	**Vibrator Test** Touch the "Start" icon

	**Camera Test – Snapshot** Touch screen to capture
	**Camera Test - Camcoding** Camera is recoding for 5 seconds
	**Motion Sensor Test** Check 3 positions -> Position horizontally -> Position Vertically -> Position side

	**GPS BT Wifi Test** GPS(RF) test : CNO is some value : OK Bluetooth Scanning is PASS : OK WiFi Scanning is PASS : OK
	**Sound Loopback Test** "Look Back On" is test mode on "Look Back OFF" is test mode off
	**FM Radio Test** 87.5 Mhz is scanned automatically -> Connect ear-jack -> Touch "FM Radio Off" icon

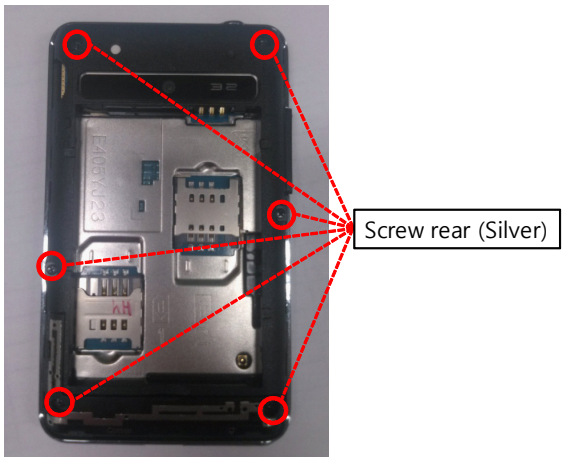
12.DISASSEMBLE GUIDE

1. Disassemble Battery Cover



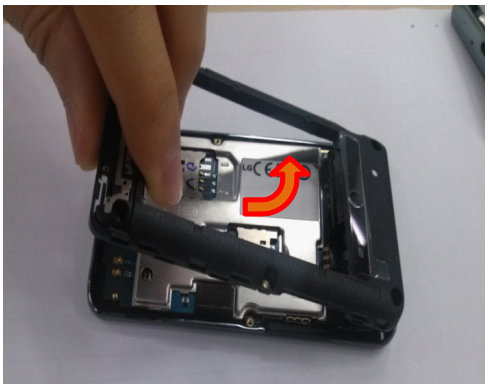

Take apart the battery cover using notches below

2. Disassemble Battery & Screw

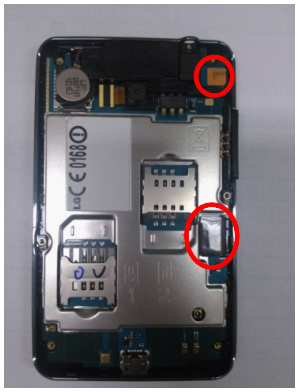
Take apart the battery and remove screw (6points)

3. Disassemble Rear Cover

Hook off the bottom of Front cover
Take apart the Rear cover out of Front cover starting from bottom

4. Disassemble Main PCB



Take the FPCB out of main PCB

Widen the gap between Front cover and main PCB and hook off

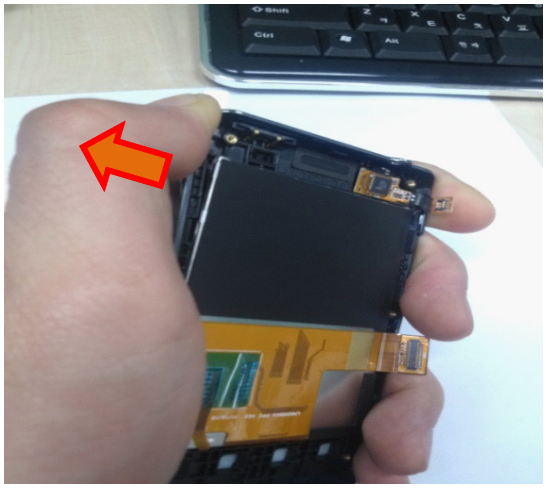
Hook off the left side for disassembling Main PCB

5. Disassemble Side volume key & Contact Dome

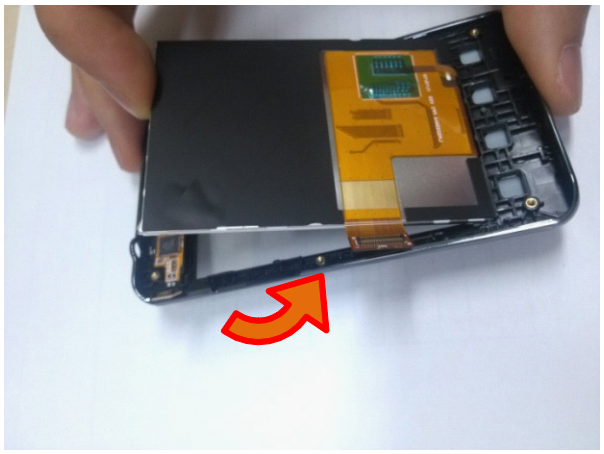
Pull Side key to the right side

Detach the contact dome out of Front cover

6. Disassemble LCD

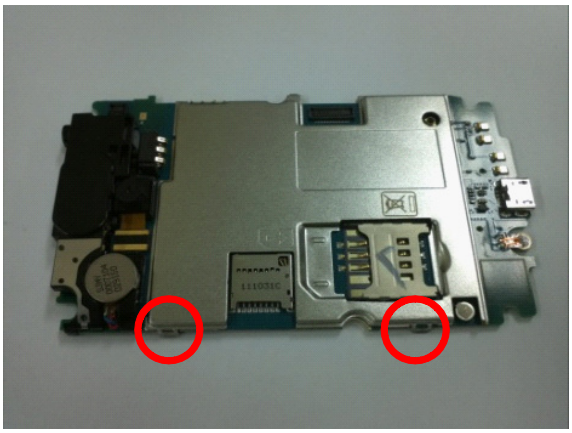


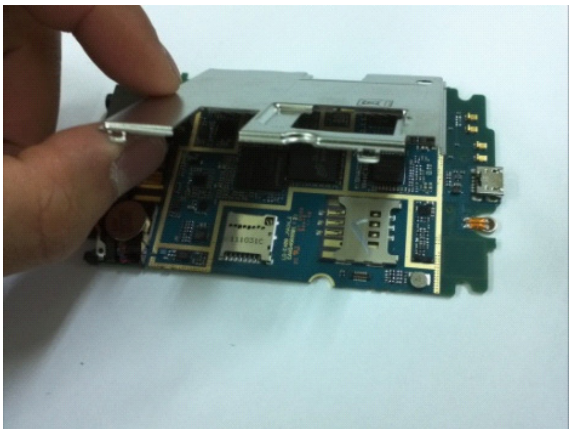
Hold the touch window and Push the left side of front cover (Back view)



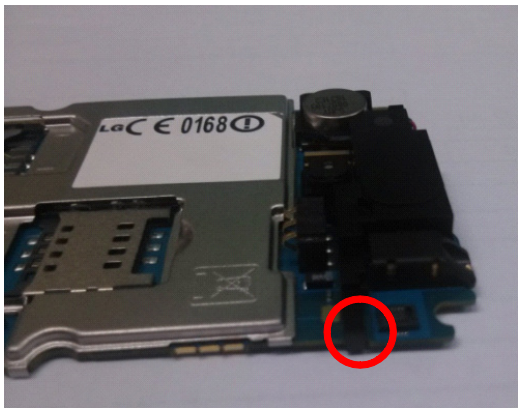
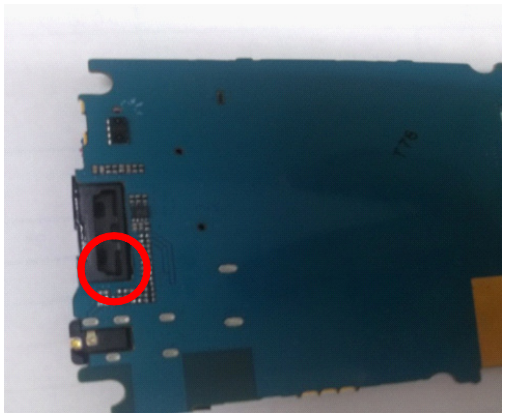
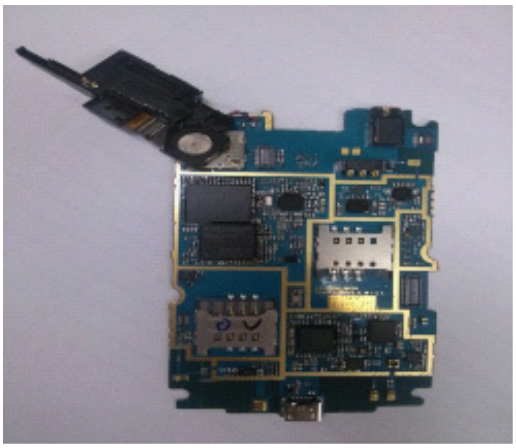
Take apart the LCD out of Front cover
Tip : Easy to take apart the LCD module from top side

7. Disassemble Shield Can & Speaker module





Hook off the notches below (2points) and pull on the other side

<table>
<tr><td>  </td><td rowspan="3">Hook off the notches below (3points) and detach the speaker module out of main PCB</td></tr>
<tr><td>  </td></tr>
<tr><td>  </td></tr>
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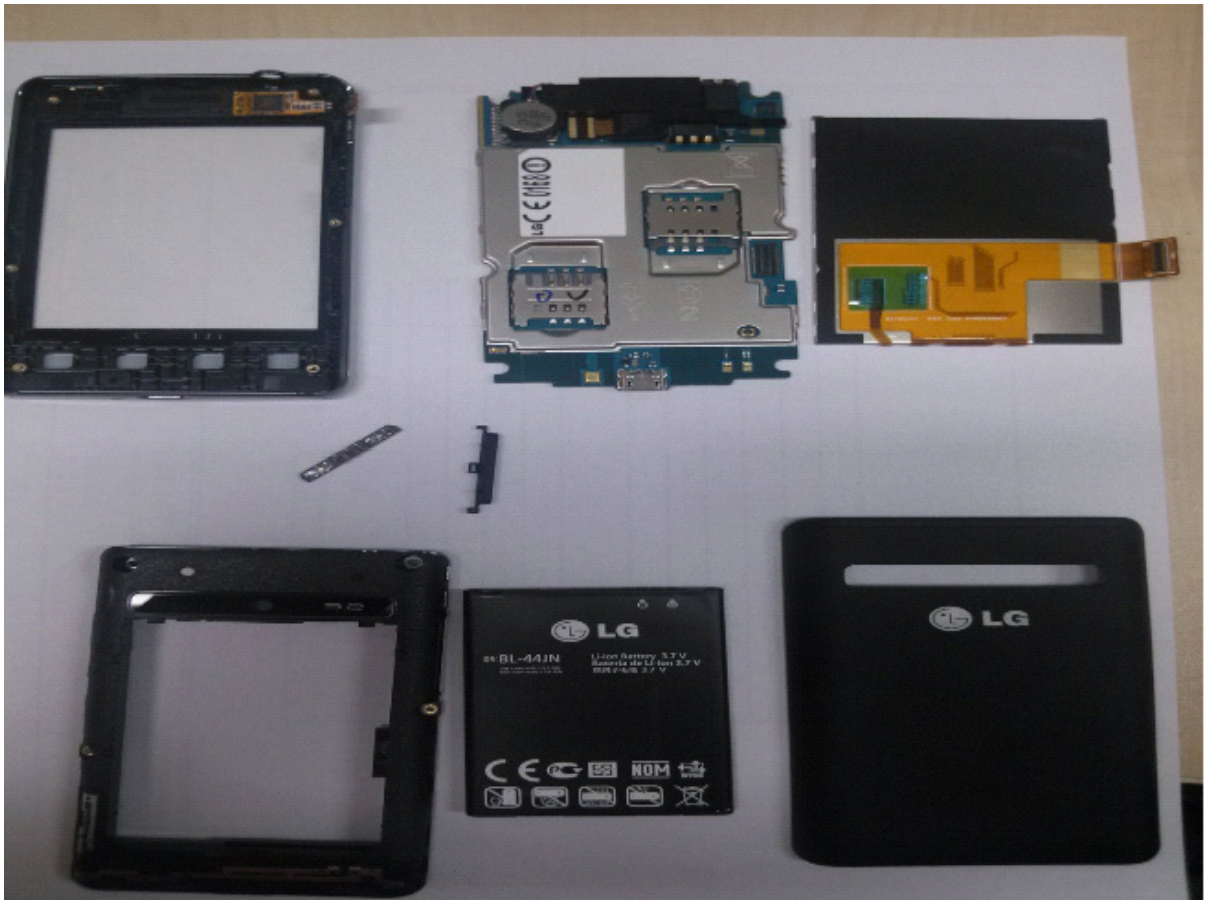
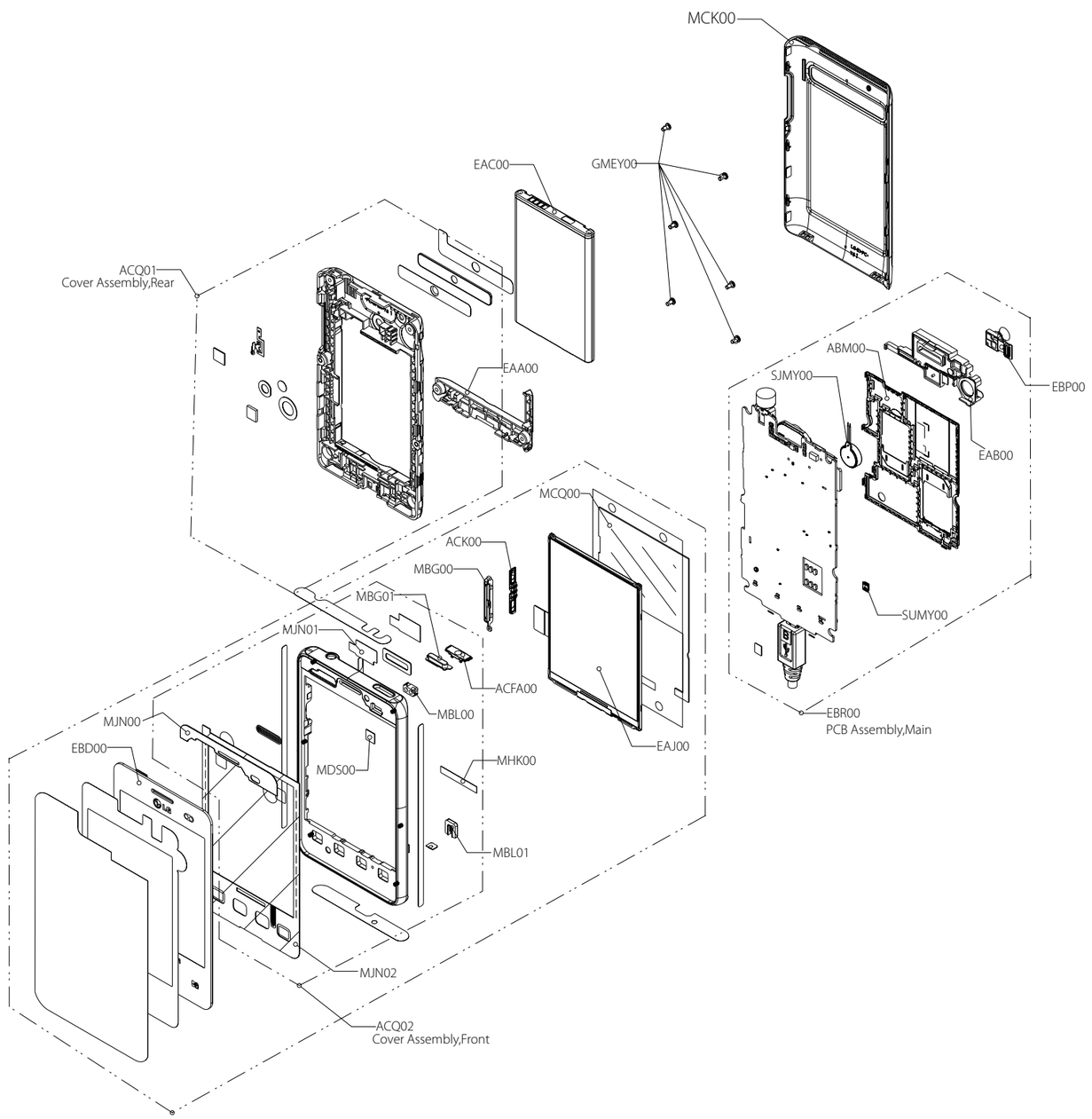
8. Complete disassembling E405



13. EXPLODED VIEW & REPLACEMENT PART LIST

13.1 EXPLODED VIEW(SBOM)



Location	Description
ACK00	Contact Assembly
EAJ00	LCD Module
ACQ02	Cover Assembly,Front
ACFA00	Contact Assembly,Side Button
MBG01	Button
MJN00	Tape,Window
MJN02	Tape,Window
MBL00	Cap
MBL01	Cap
MJN01	Tape
MHK00	Sheet
MDS00	Gasket
MCQ00	Damper,LCD
MBG00	Button,Side
EBD00	Touch Window Assembly
ACQ01	Cover Assembly,Rear
EAA00	PIFA Antenna,Multiple
EBR00	PCB Assembly,Main
SJMY00	Motor,DC
EBP00	Camera Module
ABM00	Can Assembly,Shield
EAB00	Speaker Module
SUMY00	Microphone,Condenser
GMEY00	Screw,Machine
EAC00	Rechargeable Battery,Lithium Ion
MCK00	Cover,Battery

13.2 ReplacementParts <Mechanic component>

Note: This Chapterisused for reference,Part order is ordered by SBOM standard on GCSC

Level	LocationNo.	Description	PartNumber	Spec	Remark
1	AGQ000000	Phone Assembly	AGQ86847702	LGE405.ACISBK BK:BLACK BLACK -	
2	ACQ100400	Cover Assembly,EMS	ACQ86040913	LGE405.ACISBK BK:BLACK BLACK -	
3	ACQ003400	Cover Assembly,Bar	ACQ86017011	LGE405F.ABRABK BK:BLACK BLACK -	
4	ACK00	Contact Assembly	ACK73029001	LGMS840.AMTPTG BK:Black -	
4	ACQ02	Cover Assembly,Front	ACQ86017101	LGE405F.ABRABK BK:BLACK BLACK -	
5	ACFA00	Contact Assembly Side Button	ACFA0000301	i-Common ZZZBK ZZ:Without Color 1Button Type	
5	MBG01	Button	MBG64569601	MOLD PC LUPOY SC-1004A LGE405F.ABRABK BK:BLACK BLACK -	
5	MJN061102	Tape,Protect	MJN68268101	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
5	MJN061101	Tape,Protect	MJN68268001	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
5	MJN061100	Tape,Protect	MJN68267901	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
5	MJN00	Tape,Window	MJN68144301	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
5	MJN02	Tape,Window	MJN68144201	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
5	MDJ000001	Filter	MDJ63447501	COMPLEX LGE405F.ABRABK BK:Black -	
5	MDJ000000	Filter	MDJ63447401	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
5	MCQ074200	Damper,Speaker	MCQ67048801	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
5	MBL00	Cap	MBL65281901	MOLD SILCON RUBBER LGE400.AITABK ZZ:Without Color -	

Level	LocationNo.	Description	PartNumber	Spec	Remark
5	MBL01	Cap	MBL65266801	MOLD RUBBER SILICON LGE405F.ABRABK BK:BLACK BLACK -	
5	ACQ033200	Cover Assembly Front(Sub)	ACQ86041101	LGE405F.ABRABK BK:BLACK BLACK -	
6	MET099500	INSERT,NUT	MICE0016902	MECH_COMMON ZY,ZZ,PRESS, STS, , , , ,	
6	MCK032700	Cover,Front	MCK67142401	MOLD LUPOY GP-1000ML LGE405F.ABRABK BS:Bright Silver -	
5	MCQ000000	Damper	MCQ67036601	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
4	MEZ000000	Label	MLAZ0038303	COMPLEX LG-LC3200 WA:White PRINTING, PPRI PRINTING	
4	MJN000001	Tape	MJN68248901	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
4	MJN061101	Tape,Protect	MJN68248501	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
4	MJN061100	Tape,Protect	MJN68208202	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
4	MJN01	Tape	MJN68077501	COMPLEX LGE400.ADEUSK ZZ:Without Color -	
4	MHK00	Sheet	MHK63808801	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
4	MEV000000	Insulator	MEV64178701	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
4	MDS00	Gasket	MDS64070401	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
4	MCQ00	Damper,LCD	MCQ67031401	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
4	MBG00	Button,Side	MBG64569701	MOLD PC LUPOY SC-1004A LGE405F.ABRABK BK:BLACK BLACK -	
3	ACQ01	Cover Assembly,Rear	ACQ86017301	LGE405F.ABRABK BK:BLACK BLACK -	
4	MCQ015700	Damper Connector	MCQ66963601	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	

Level	LocationNo.	Description	PartNumber	Spec	Remark
4	MKC009400	Window,Camera	MKC64361901	CUTTING ACRYL LGE405F.ABRABK BK:BLACK BLACK -	
4	MJN061100	Tape,Protect	MJN68155101	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
4	MJN089300	Tape,Window	MJN68144501	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
4	MEZ000900	Label,After Service	MEZ64319901	COMPLEX LGF120L.ALGTWA ZZ:Without Color F120l AS Label	
4	MCQ015701	Damper Connector	MCQ66963701	COMPLEX LGE405F.ABRABK BK:Black -	
4	MCQ049800	Damper,Motor	MCQ66963501	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
4	MCQ009400	Damper,Camera	MCQ66963401	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
4	ACQ063400	Cover Assembly Rear(Sub)	ACQ86070101	LGE405F.ABRABK BK:BLACK BLACK -	
5	MBF000000	Bush	MBF62844201	PRESS STS 1.8 LGE400.AITABK ZZ:Without Color -	
5	MCK063300	Cover,Rear	MCK67142501	MOLD LUPOY GP-1000ML LGE405F.ABRABK BK:BLACK BLACK -	
5	MDJ000000	Filter	MDJ63504201	COMPLEX LGE405F.ABRABK BK:BLACK BLACK -	
5	ABM00	Can Assembly,Shield	ABM73816701	LGE405F.ABRABK ZZ:Without Color -	
6	MBK070300	Can,Shield	MBK63255801	PRESS STEEL 0.3mm LGE405F.ABRABK AV:Aluminum Silver -	
6	MEV000000	Insulator	MEV64167901	COMPLEX LGE405F.ABRABK ZZ:Without Color -	
5	MEZ000000	Label	MLAZ0038301	COMPLEX LG-VX6000 ZZ:Without Color PID Label 4 Array PRINTING,	
6	ANT1001 ANT1002 ANT1004	Contact	MCIZ0008401	COMPLEX LG-C900 ATTDW ZZ:Without Color PRESS, BeCu, , 3.0, 1.2, 1.5,	
3	GMEY00	Screw,Machine	GMEY0011201	GMEY0011201 BH + 1.4mM 3mM MSWR FZB N N LG ELECTRONICS INC.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
2	MEZ002100	Label,Approval	MEZ64584701	COMPLEX LGE405.ACISBK ZZ:Without Color -	
1	AGF000000	Package Assembly	AGF76512301	LGE405.ACISBK ZZ:Without Color E405 CIS (S7T_CIS UB/CIS Label_CH/Pallet 720EA)	
2	MAY047100	Box,Master	MBEE0061001	COMPLEX GD510.ACZESV ZZ:Without Color EU1 Master Box	
2	MFZ005500	Packing,Blister	MFZ63334407	COMPLEX LGE405.ACISBK ZZ:Without Color E405 Tray	
2	MEZ047200	Label,Master Box	MLAJ0004402	PRINTING CG300 CGR DG ZZ:Without Color LABEL MASTER BOX(for CGR TDR 2VER. mbox_label) GSM standard_master box label	
2	MEZ084100	Label,Unit Box	MLAQ0018301	PRINTING GS200 CISBK ZZ:Without Color Unit Box Label(CIS USE-LGE-Peel-90*40) CIS only_China_Peel_unit box label_90x40	
2	MAF086500	Bag,Vinyl	MBAD0005204	COMPLEX LG-LX260 SPRAG ZZ:Without Color -	
2	MAY084000	Box,Unit	MAY65652201	COMPLEX LGE405.ACISBK ZZ:Without Color LGE405 CIS UB(S7T)	
2	MEZ000000	Label	MLAZ0050901	COMPLEX KU990.AGBRBK ZZ:Without Color Battery Warning Label (Lithium ion Battery Label)	
2	AGJ000000	Pallet Assembly	APLY0003911	GT540.ACISBK ZZ:Without Color EU1 TYPE_CIS_CIS Body(SW)+Cap(EU)+AL_720ea	
3	MAY010800	Box,Carton	MBEC0003604	COMPLEX GX300.ACISWR ZZ:Without Color EU1 CIS Body(720ea/H:605mm)	
3	MCCL00	Cap,Box	MCCL0002501	COMPLEX GD510 CZESV ZZ:Without Color -	
3	MPCY00	Pallet	MPCY0012403	COMPLEX KG800 FRABK DB:DARK BLUE -	
1	AAD000000	Addition Assembly	AAD86129803	LGE405.ACISBK BK:BLACK BLACK -	
2	MCK00	Cover,Battery	MCK67142601	MOLD LUPOY GP-1000ML LGE405F.ABRABK BK:BLACK BLACK -	
2	MEZ002100	Label,Approval	MEZ64188201	COMPLEX LGA190.ACISBK ZZ:Without Color -	
2	MEZ002101	Label,Approval	MEZ64570001	CUTTING LAMI LGP940.ACISBK WA:White -	

13.2 ReplacementParts <Main component>

Note: This Chapterisused for reference, Part order is ordered by SBOM standard on GCSC

Level	LocationNo.	Description	PartNumber	Spec	Remark
4	EAJ00	LCD Module	EAJ62130001	LM320DN1A QVGA 3.2INCH 240X320 400CD COLOR 60% 4/3 500 60Hz Inverter N LED 2D - TOVIS	
4	EBD00	Touch Window Assembly	EBD61346101	STWC-L0012A CAPACITIVE TOUCH PFF Melfas MMS128 3.2" BTOB - SUNTEL CO.,LTD.	
4	EAA030101	PIFA Antenna,WiFi	EAA62750301	KI-M24810 SINGLE -5DB 5:1 Metal Stamping Type - KOMATECH CO.,LTD	
4	EAA00	PIFA Antenna,Multiple	EAA62750401	KI-M08809 SIX -5DB 5:1 IMA Type - KOMATECH CO.,LTD	
3	EBR00	PCB Assembly,Main	EBR75231403	LGE405.ACISBK 1.0 Main	
4	EBR071500	PCB Assembly Main,Insert	EBR75629501	LGE405F.ABRABK 1.0 Main	
5	SJMY00	Motor,DC	SJMY0007109	WHVM-1030B15 WHVM-1030B15 WHVM-1030B15,3 V,80 mA,10*3.0 ,17mm WOOSUNG G&T CO.,LTD WOOSUNG G&T CO.,LTD	
5	RAA050100	Resin,PC	BRAH0001301	UF2040 or 3075BHF . . NONE	
5	EBP00	Camera Module	EBP61581801	CW3033-A99CC CW3033-A99CC 3M FF Hynix 1/5" FPC 90deg. 3.5mm MIPI type COWELL ELECTRONICS CO.,LTD	
5	EAB00	Speaker Module	EAB62652701	1810-8T-31MP Nd-Fe-B 700mW 8OHM 90DB 700HZ 55.6*20.59*4.45, 1810 3t SPK+ANT(SUB) enclosure, spring SPRING KIRYN TELECOM CO., LTD	
4	EBR071800	PCB Assembly Main,SMT	EBR75157903	LGE405.ACISBK 1.0 Main	
5	EBR071700	PCB Assembly Main,SMT Top	EBR75231502	LGE405.ABOOBK 1.0 Main	
6	C6004	Capacitor Ceramic,Chip	ECCH0002001	C1005JB0J104KT000F 0.1uF 10% 6.3V Y5P -30TO+85C 1005 R/TP - TDK CORPORATION	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	C6003 C7006	Capacitor Ceramic,Chip	ECCH0004904	GRM155R60J105K 1uF 10% 6.3V X5R -55TO+85C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C6001 C6005	Capacitor Ceramic,Chip	ECCH0017601	CL05A475MQ5NRNC 4.7uF 20% 6.3V X5R -55TO+85C 1005 R/TP 0.5MM SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C7007	Capacitor Ceramic,Chip	ECZH0000830	C1005C0G1H330JT000F 33pF 5% 50V NP0 -55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C7012	Capacitor Ceramic,Chip	ECZH0001216	C1005X5R1A224KT000E 220nF 10% 10V X5R -55TO+85C 1005 R/TP - TDK KOREA COOPERATION	
6	LD6000 LD6001 LD6002 LD6003	LED,Chip	EDLH0015103	19-217/UTD-S887-1/TR8 Snow White 2.7~3.0 30mA 90~180mcd x, y 110mW 1608 R/TP 2P - EVERLIGHT ELECTRONICS CO., LTD.	
6	ZD7000	Diode,TVS	EDTY0010101	ESD9B5.0ST5G 5V 5.8V min. 12.5V 1A - SOD-923 R/TP 2P 1 SCG HONG KONG SAR LTD.	
6	R7006	PCB ASSY,MAIN PAD OPEN	SAFO0000401	AX3100 ATL SV_SHIPBACK,MAIN,A,0OHM DNI	
6	R6001 R6002 R6003 R6006 R6007	Resistor,Chip	ERHY0000254	MCR01MZP5J472 4.7KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R6004	Resistor,Chip	ERHZ0000206	MCR01MZP5F10R0 10OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R7000 R7001	Resistor,Chip	ERHZ0000348	MCR01MZP5F12R0 12OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R7005	Resistor,Chip	ERHZ0000405	MCR01MZP5J103 10KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R7002 R7003	Resistor,Chip	ERHZ0000407	MCR01MZP5J105 1MOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R6009 R6010 R6011 R6012	Resistor,Chip	ERHZ0000441	MCR01MZP5J220 22OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R7004	Resistor,Chip	ERHZ0000443	MCR01MZP5J222 2.2KOHM 5% 1/16W 1005 R/TP - ROHM.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	VA7006 VA7007	Varistor	SEVY0004101	ICVN0505X150FR 5.6V 0% 360F 1.0*0.5*0.55 NONE SMD R/TP INNOCHIPS TECHNOLOGY	
6	VA6000 VA6001	Varistor	SEVY0004301	ICVL0518100Y500FR 18V 0% 10F 1.0*0.5*0.55 NONE SMD R/TP INNOCHIPS TECHNOLOGY	
6	VA7000 VA7001	Varistor	SEVY0004401	ICVL0518400V500FR 18V 0% 40pF 1.0*0.5*0.55 NONE SMD R/TP INNOCHIPS TECHNOLOGY	
6	VA7008	Varistor	SEVY0010501	IECS0505C040FR 10V 0% 4E-12F 1.0x0.5x0.3 IEC61000-4-1 (ESD) level #4 SMD R/TP INNOCHIPS TECHNOLOGY	
6	FB7002 FB7003 FB7004	Filter,Bead	SFBH0008105	BLM15BD182SN1D 1800 ohm 1.0X0.5X0.5 25% 1.4 ohm 0.1A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	
6	U6001	IC,Proximity	EAN62510201	GP2AP004S00F Proximity Sensor 4X2X1.2 MOLD R/TP 8P - SHARP CORPORATION.	
6	R6008	Resistor,Chip	ERHZ0000434	MCR01MZP5J1R0 1OHM 5% 1/16W 1005 R/TP - ROHM.	
6	EAX010000	PCB,Main	EAX64695401	LGE405F.ABRABK 1.0 FR-4 Staggered via 8 0.8 Main	
6	C7010 C7011	Capacitor Ceramic,Chip	ECCH0000122	MCH155A470JK 47pF 5% 50V NP0 -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C7008	Capacitor Ceramic,Chip	ECCH0000112	MCH155C150J 15pF 5% 50V NP0 -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	U7000	IC,Comparator	EAN62065901	MAX14579E 2.5~5.5V 2uA COMPARATOR TDFN R/TP 8P Headset Jack Detection IC with LDO, 15kV ESD MAXIM INTEGRATED PRODUCTS INC.	
6	C7009	Capacitor Ceramic,Chip	ECZH0000846	C1005C0G1H8R2CT000F 8.2pF 0.25PF 50V NP0 -55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	L7002	Inductor Multilayer,Chip	ELCH0010402	LK1005 R27K-T 270NH 10% - 25mA - - 1.2OHM 120MHZ 10 SHIELD NONE 1.0X0.5X0.5MM R/TP TAIYO YUDEN CO.,LTD	
5	EBR071600	PCB Assembly Main,SMT Bottom	EBR75158002	LGE405.ABOOBK 1.0 Main	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	U3001	IC,MCP,eMMC	EAN62171901	H9DP32A4JJMCGR-KEM NAND/4G SDRAM/4G(2G*2/ 32bit) 1.7VTO1.95V,2.7VTO3.6V,1.7VTO1.95V	
6	C6004	Capacitor Ceramic,Chip	ECCH0002001	C1005JB0J104KT000F 0.1uF 10% 6.3V Y5P -30TO+85C 1005 R/TP - TDK CORPORATION	
6	C6003 C7006	Capacitor Ceramic,Chip	ECCH0004904	GRM155R60J105K 1uF 10% 6.3V X5R -55TO+85C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C7009	Capacitor Ceramic,Chip	ECZH0000846	C1005C0G1H8R2CT000F 8.2pF 0.25PF 50V NP0 -55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	R4009 R4022	Resistor,Chip	ERHZ0000204	MCR01MZP5F1003 100KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R7005	Resistor,Chip	ERHZ0000405	MCR01MZP5J103 10KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R2000 R4017	Resistor,Chip	ERHZ0000493	MCR01MZP5J513 51KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R4028	Resistor,Chip	ERHZ0000510	MCR01MZP5J751 750OHM 5% 1/16W 1005 R/TP - ROHM.	
6	VA8000 VA8001 VA8002 VA8003 VA8004 VA8005 VA8006 VA8007	Varistor	SEVY0005101	ICVL0518050FR 18V 0% 5F 1.0*0.5*0.55 NONE SMD R/TP INNOCHIPS TECHNOLOGY	
6	VA8008 VA8009 VA8010 VA8011 VA8012 VA8013 VA8014	Varistor	SEVY0005403	ICVS0518270FR 18V 0% 27F 1.0X0.5X0.55 NONE SMD R/TP INNOCHIPS TECHNOLOGY	
6	C1019 C1031 C2005 C2017 C4065 C4066 C9035	Capacitor Ceramic,Chip	ECCH0000143	MCH155CN102KK 1nF 10% 50V X7R -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	C2004	Capacitor Ceramic,Chip	ECCH0000147	MCH155CN222KK 2.2nF 10% 50V X7R - 55TO+125C 1005 R/TP - ROHM.	
6	C4037	Capacitor Ceramic,Chip	ECCH0000149	MCH155CN332KK 3.3nF 10% 50V X7R - 55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C1016 C1017 C2009 C2011 C2013 C9015 C9016 C9017 C9021 C9022 C9026 C9036 C9038	Capacitor Ceramic,Chip	ECCH0000155	MCH153CN103KK 10nF 10% 16V X7R - 55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C4025	Capacitor Ceramic,Chip	ECCH0000161	MCH153CN333KK 33nF 10% 16V X7R - 55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C5010	Capacitor Ceramic,Chip	ECCH0000182	GRM155R61A104K 0.1uF 10% 10V X5R - 55TO+85C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C9032	Capacitor Ceramic,Chip	EAE62286801	CL03A104KP3NNNC 0.0000001F 10% 10V X5R - 55TO+85C 0603 R/TP 0.3 SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C4029	Capacitor,TA,Conformal	EAE62287901	251M1002107MR12A168 100uF 20% 10V 50UA - 55TO+125C 0.6OHM 3.2X1.6X1.1MM NONE SMD R/TP 1.2T max. MATSUO ELECTRIC CO.,LTD	
6	C4009 C4010 C4013 C4018 C4071	Capacitor Ceramic,Chip	EAE62506501	CL05A475MP5NRNC 4.7uF 20% 10V X5R - 55TO+85C 1005 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1038	Capacitor Ceramic,Chip	EAE62542701	CL21A226MPCLRNC 22uF 20% 10V X5R - 55TO+85C 2012 R/TP 0.95T max. SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	CN8000	Socket,Card	EAG62830201	104031-0811 SD 8P ANGLE SMD R/TP 11.95x11.40x1.42t, Push-pull type MOLEX	
6	CN7001	Jack,Phone	EAG63070601	KJA-PH-4-0176 5P 2P ANGLE R/TP 3.5M BLACK 5P - KSD CO., LTD	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	J8000	Card Socket	EAG63070701	5000-6P-1.3L SIM 6P STRAIGHT SMD T/REEL - HYUPJIN I&C CO.,LTD.	
6	CN4000	Connector,I/O	EAG63090001	04-5161-005-100-868 7P 0.90MM ANGLE RECEPTACLE DIP R/TP Normal New IO Connector KYOCERA ELCO KOREA SALES CO.,LTD.	
6	J8001	Socket,DIMM/SIM M	EAG63193601	SIMF006G2K55-00R 6P STRAIGHT STANDARD SMD T/REEL - SHENZHEN EVERWIN PRECISION TECHNOLOGY CO.,LTD.	
6	ZD4002	Diode,TVS	EAH61872501	PESD5V0S1UA 5V 6.2V min. 9.8V 47A 360mW SOD323 R/TP 2P 1 NXP Semiconductors	
6	ZD4001	Diode,TVS	EAH61872601	PESD12VS1UA 12V 13.3V min. 19V 22.5A 360mW SOD323 R/TP 2P 1 NXP Semiconductors	
6	FB4000 FB4001	Filter,Bead	EAM62070801	BLM15EG221SN1D 220 ohm 1.0X0.5X0.5 25% 0.28 ohm 0.7A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	
6	FB9000	Filter,Bead	EAM62471001	BLM03AX241SN1D 240 ohm 0.6X0.3X0.33 25% 0.38 ohm 0.35A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	
6	FL1000	Filter,Saw,Dual	EAM62492501	SAWFD1G84CB0F0A 1842.5/1960MHz 1.5*1.1*0.5 SMD R/TP 10P MURATA MANUFACTURING CO.,LTD.	
6	FL1001	Filter,Saw,Dual	EAM62492601	SAWFD881MCF0F0A 881.5/942.5MHz 1.5*1.1*0.5 SMD R/TP 10P MURATA MANUFACTURING CO.,LTD.	
6	FL1007	Filter,Duplexer	EAM62511001	B8072 942.5 925 to 960 897.5 880 to 915 3.2 2.8 2.0x1.6x0.45 DUAL SMD R/TP 9P EPCOS PTE LTD.	
6	U9000	IC,Bluetooth	EAN61966101	WCN-2243-0-58BWLNSP-S/TR-05 17VTO2.7V,2.2VTO3V,1.7VTO1.9V 120mW 58P - WLCSP R/TP-T 58P QUALCOMM INCORPORATED.	
6	U1000	IC,RF Transceiver,3G	EAN62090401	RTR6285A GSM/EDGE/3G Quad with MSM7227A CSP R/TP 137P QUALCOMM INCORPORATED.	
6	U4001	IC,PMIC	EAN62090501	PM8029 3 to 4.4V adj 1.3W NSP R/TP 140P - QUALCOMM INCORPORATED.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	U6000	IC,Acceleration Sensor	EAN62222201	BMC050 Accelerometer with Geomagnetic Sensor 3X3X1 QFN R/TP 16P Accelerometer with Geomagnetic Sensor BOSCH SENSORTEC GMBH	
6	U5000	IC,Sub PMIC	EAN62334401	BU61800GWL 2.7 to 5.5V adj 0W CSP R/TP 25P - ROHM Semiconductor KOREA CORPORATION	
6	U1003	IC,Power Amplifier	EAN62336501	ACPM-5508-TR1 3.2V to 4.2V 0 0 0W 0W 0 1 SMD R/TP 10P ACPM-5508-TR1, Band8, 2mode, with CPL, 3*3*0.9mm AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	
6	U4000	IC,Mini ABB	EAN62339701	LP8727- B MUIC with Charger IC CSP R/TP 25P TEXAS INSTRUMENTS KOREA LTD, HONGKONG BRANCH.	
6	U1002	IC,Power Amplifier	EAN62352401	ACPM-5501-TR1 3.2V to 4.2V 0 0 0W 0W 0 1 SMD R/TP 10P Band1, 2mode, with CPL, 3*3*0.9size AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	
6	U2000	IC,Digital Baseband Processor,3G	EAN62405901	MSM7225A-1-AA 576NSP,ARMv7(800MHz),HSDPA(DL7.2Mbps only), HVGA LCD, VGA30fps,5M,MIPI CSI_DSI NSP R/TP 576P QUALCOMM INCORPORATED.	
6	U9001	IC,WiFi	EAN62416201	WCN1314-0-87WLNSP-TR-0D WCN1314 Revision version, WiFi(11bgn) signle band, 3.95x4.16x0.63, 0.4pitch, 65nm, WLCSP R/TP 87P QUALCOMM INCORPORATED.	
6	U1001	Module,Tx Module	EAT61673301	RF3242 0DBM 0DB 0% 0A 0A 0DB 0DBM 0DBM 22P 6.63x5.24x0.975MM WGPRS Quad Tx Dual Rx, SP6T, Dual WCDMA Port, 22pin, 6.63*5.24*0.975 RF MICRO DEVICES INC	
6	X2000	Oscillator VCTCXO	EAW61543601	X1G003581002700 19.2MHZ 2PPM 2.8V 2.5x2.0x0.8MM ; SMD R/TP EPSON TOYOCOM CORP	
6	C9018 C9025	Capacitor Ceramic,Chip	ECCH0000110	MCH155A100D 10pF 0.5PF 50V NP0 -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C1105	Capacitor Ceramic,Chip	ECCH0000113	MCH155A180J 18pF 5% 50V NP0 -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	C1055 C1073 C4001 C4003 C4027 C8002 C8003 C8005 C8006 C8007 C8009 C9002 C9012	Capacitor Ceramic,Chip	ECCH0000115	MCH155A220JK 22pF 5% 50V NP0 -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C4030 C7004 C7005 L1023	Capacitor Ceramic,Chip	ECCH0000117	CL05C270JB5NNNC 27pF 5% 50V NP0 -55TO+125C 1005 R/TP 0.5 SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1047	Capacitor Ceramic,Chip	ECCH0000120	MCH155A390J 39pF 5% 50V NP0 -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C7010 C7011	Capacitor Ceramic,Chip	ECCH0000122	MCH155A470JK 47pF 5% 50V NP0 -55TO+125C 1005 R/TP - ROHM Semiconductor KOREA CORPORATION	
6	C1080 C1082	Capacitor Ceramic,Chip	ECCH0000137	C1005X7R1H331KT000F 0.33nF 10% 50V X7R -55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C1116	Capacitor Ceramic,Chip	ECCH0000183	GRM1555C1H1R8C 1.8pF 0.25PF 50V NP0 -55TO+125C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C1028 C1040 C1079 C1092 L1022	Capacitor Ceramic,Chip	ECCH0000184	GRM1555C1H2R7C 2.7pF 0.25PF 50V NP0 -55TO+125C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C1013 C1024	Capacitor Ceramic,Chip	ECCH0000185	GRM1555C1H5R6C 5.6pF 0.25PF 50V NP0 -55TO+125C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C1006 C1012 C1020 C1025	Capacitor Ceramic,Chip	ECCH0000187	GRM1555C1H151J 150pF 5% 50V NP0 -55TO+125C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C1085	Capacitor Ceramic,Chip	ECCH0000195	GRM1555C1H3R9C 3.9pF 0.25PF 50V NP0 -55TO+125C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	C3005 C3010 C3012 C3016 C3021 C3022 C4040 C4041 C4045 C4046 C4047 C4048 C4069 C4070 C5002 C5003 C5011 C5012 C5013 C5014 C9033 C9041	Capacitor Ceramic,Chip	ECCH0000198	CL05A225MQ5NSNC 2.2uF 20% 6.3V X5R - 55TO+85C 1005 R/TP . SAMSUNG ELECTRO- MECHANICS CO., LTD.	
6	C1041 C1048	Capacitor Ceramic,Chip	ECCH0000901	C1005C0G1H2R2CT000F 2.2pF 0.25PF 50V NP0 - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C1115	Capacitor Ceramic,Chip	ECCH0001001	C1005C0G1H6R8CT000F 6.8pF 0.25PF 50V NP0 - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C1081 C1096	Capacitor Ceramic,Chip	ECCH0005603	GRM188R61A225K 2.2uF 10% 10V X5R - 55TO+85C 1608 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C1052	Capacitor Ceramic,Chip	ECCH0005604	GRM188R60J106M 10000000 pF,6.3V,M,X5R,TC,1608,R/TP,0.8 mm MURATA MANUFACTURING CO.,LTD.	
6	C1053	Capacitor Ceramic,Chip	ECCH0006201	C1608X5R0J475KT000N 4.7uF 10% 6.3V X5R - 55TO+85C 1608 R/TP - TDK CORPORATION	
6	C4011 C5008	Capacitor Ceramic,Chip	ECCH0007803	CL10A106MP8NNNC 10uF 20% 10V X5R - 55TO+85C 1608 R/TP 0.8MM SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C5001 C5009	Capacitor Ceramic,Chip	ECCH0007804	CL05A225MP5NSNC 2.2uF 20% 10V X5R - 55TO+85C 1005 R/TP 0.5MM SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C9042	Capacitor Ceramic,Chip	ECCH0009101	C0603X5R0J104KT00NN 0.1uF 10% 6.3V X5R - 55TO+85C 0603 R/TP - TDK CORPORATION	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	C9031 C9043	Capacitor Ceramic,Chip	ECCH0009103	C0603C0G1H101JT00NN 100pF 5% 50V C0G - 55TO+125C 0603 R/TP - TDK CORPORATION	
6	C4068	Capacitor Ceramic,Chip	ECCH0009603	CE JMK212 BJ476MG-T 47uF 20% 6.3V X5R - 55TO+85C 2012 R/TP 1.25mm TAIYO YUDEN CO.,LTD	
6	C2018	Capacitor Ceramic,Chip	ECCH0010501	GRM1555C1H7R5D 7.5pF 0.5PF 50V C0G - 55TO+125C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C3024 C3041 C4033 C4034 C4035 C4036	Capacitor Ceramic,Chip	ECCH0017501	CL10A226MQ8NRNE 22uF 20% 6.3V X5R - 55TO+85C 1608 R/TP 0.8MM SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C6001 C6005	Capacitor Ceramic,Chip	ECCH0017601	CL05A475MQ5NRNC 4.7uF 20% 6.3V X5R - 55TO+85C 1005 R/TP 0.5MM SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	C1003	Capacitor Ceramic,Chip	ECZH0000802	C1005C0G1H010CT 1pF 0.25PF 50V NP0 - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C1007 C1014 C1015 C1046 C1056 C1074 C1078 C1093 C1094 C1098 C1101 C1109 C1110 C4028 C9000 C9039 C9040 L1010 L1028 L1102	Capacitor Ceramic,Chip	ECZH0000813	C1005C0G1H101JT 100pF 5% 50V C0G - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C7007	Capacitor Ceramic,Chip	ECZH0000830	C1005C0G1H330JT000F 33pF 5% 50V NP0 - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	L1029 L1031	Capacitor Ceramic,Chip	ECZH0000839	C1005C0G1H4R7CT000F 4.7pF 0.25PF 50V NP0 - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C1026 C1027 C1049	Capacitor Ceramic,Chip	ECZH0000841	C1005C0G1H560JT000F 56pF 5% 50V NP0 - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	L9000	Capacitor Ceramic,Chip	ECZH0001002	C1005CH1H0R5BT000F 0.5pF 0.1PF 50V NP0 - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C4042 C4062	Capacitor Ceramic,Chip	ECZH0001102	C1005X7R1C183KT000F 18nF 10% 16V X7R - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C9030	Capacitor Ceramic,Chip	ECZH0001121	C1005X7R1H471KT000F 470pF 10% 50V X7R - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C1095 C1097	Capacitor Ceramic,Chip	ECZH0001122	C1005X7R1H681KT000F 680pF 10% 50V X7R - 55TO+125C 1005 R/TP - TDK KOREA COOPERATION	
6	C2003 C2010 C2012 C4000 C4005 C4006 C4007 C4022 C4023 C4067 C5006 C5007	Capacitor Ceramic,Chip	ECZH0001215	C1005X5R1A105KT000F 1uF 10% 10V X5R - 55TO+85C 1005 R/TP - TDK KOREA COOPERATION	
6	C7012	Capacitor Ceramic,Chip	ECZH0001216	C1005X5R1A224KT000E 220nF 10% 10V X5R - 55TO+85C 1005 R/TP - TDK KOREA COOPERATION	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	C3000 C3001 C3002 C3015 C3025 C3026 C3027 C3028 C3029 C3030 C3032 C3033 C3034 C3035 C3036 C3037 C3038 C3039 C3040 C3042 C3043 C3044 C3045 C3046 C3047 C3048 C3049 C3050 C3051 C3052 C3053 C3054 C3055	Capacitor Ceramic,Chip	ECZH0001217	GRM155R60J474K 470nF 10% 6.3V X5R - 25TO+70C 1005 BK-DUP - MURATA MANUFACTURING CO.,LTD.	
6	C3056 C3057 C3058 C3059 C3060 C3061 C3062 C3063 C3064 C3065	Capacitor Ceramic,Chip	ECZH0001217	GRM155R60J474K 470nF 10% 6.3V X5R - 25TO+70C 1005 BK-DUP - MURATA MANUFACTURING CO.,LTD.	
6	C4014 C4015 C4017 C4019 C4020 C4026	Capacitor Ceramic,Chip	ECZH0003103	GRM36X7R104K10PT 100nF 10% 10V X7R - 55TO+125C 1005 R/TP - MURATA MANUFACTURING CO.,LTD.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	C4002	Capacitor Ceramic,Chip	ECZH0003503	GRM188R61E105K 1uF 10% 25V X5R -55TO+85C 1608 R/TP - MURATA MANUFACTURING CO.,LTD.	
6	C9037	Capacitor Ceramic,Chip	ECZH0025502	GRM219R60J226M 0.000022F 20% 6.3V X5R -55TO+85C 2012 R/TP 0.85MM MURATA MANUFACTURING CO.,LTD.	
6	D7000	Diode,Switching	EDSY0011901	SDB310Q 340mV 30V 200mA 1A 0SEC 150mW EMD2 R/TP 2P 1 AUK CORP	
6	D4000	Diode,TVS	EDTY0008606	PRSB6.8C 4.7V 5.7 11.5V 1A 10W DFN-2 R/TP 2P 1 PROTEK DEVICES INC.	
6	L1008	Inductor Multilayer,Chip	ELCH0001032	HK1005 18NJ-T 18NH 5% - 300mA 0.55OHM 2.1GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP TAIYO YUDEN CO.,LTD	
6	L9002	Inductor Multilayer,Chip	ELCH0001040	HK1005 3N9S-T 3.9NH 0.3NH - 300mA 0.21OHM 4GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP TAIYO YUDEN CO.,LTD	
6	L1005 L1026 L1030	Inductor Multilayer,Chip	ELCH0001406	LL1005-FHL4N7S 4.7NH 0.3NH - 300mA 0.2OHM 7GHZ 9 SHIELD NONE 1.0X0.5X0.5MM R/TP TOKO, INC.	
6	L1011	Inductor Multilayer,Chip	ELCH0001408	LL1005-FHL6N8J 6.8NH 5% - 300mA 0.23OHM 5.6GHZ 9 SHIELD NONE 1.0X0.5X0.5MM R/TP TOKO, INC.	
6	L1018 L1024	Inductor Multilayer,Chip	ELCH0001412	LL1005-FHL1N8S 1.8NH 0.3NH - 400mA 0.14OHM 15GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP TOKO, INC.	
6	L9004 L9006	Inductor Multilayer,Chip	ELCH0001425	LL1005-FHL82NJ 82NH 5% - 150mA 1.9OHM 1.15GHZ 10 SHIELD NONE 1.0X0.5X0.5MM R/TP TOKO, INC.	
6	L9003	Inductor Multilayer,Chip	ELCH0001431	LL1005-FHL68NJ 68NH 5% - 180mA 1.7OHM 1.3GHZ 10 SHIELD NONE 1.0X0.5X0.5MM R/TP TOKO, INC.	
6	L1016	Inductor Multilayer,Chip	ELCH0003816	LQG15HS3N6S02D 3.6NH 0.3NH - 300mA 0.18OHM 6GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1020	Inductor Multilayer,Chip	ELCH0003820	LQG15HS3N0S02D 3NH 0.3NH - 300mA 0.17OHM 6GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP MURATA MANUFACTURING CO.,LTD.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	L9005	Inductor Multilayer,Chip	ELCH0003828	LQG15HS2N4S02D 2.4NH 0.3NH - 300mA 0.15OHM 6GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C9003	Inductor Multilayer,Chip	ELCH0003831	LQG15HS1N0S02D 1NH 0.3NH - 300mA 0.07OHM 10GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1000	Inductor Multilayer,Chip	ELCH0003832	LQG15HS2N2S02D 2.2NH 0.3NH - 300mA - - 0.12OHM 6GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	L1015 L1017	Inductor Multilayer,Chip	ELCH0003844	LQG15HS2N0S02D 2NH 0.3NH - 300mA 0.1OHM 6GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP MURATA MANUFACTURING CO.,LTD.	
6	C1084 C1111	Inductor Multilayer,Chip	ELCH0004704	1005GC2T4N7SLF 4.7NH 0.3NH - 300mA 0.23OHM 3.5GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	C1050 C1057 C1086 L1009 L1033	Inductor Multilayer,Chip	ELCH0004705	1005GC2T8N2JLF 8.2NH 5% - 250mA 0.37OHM 2.8GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	L1012	Inductor Multilayer,Chip	ELCH0004706	1005GC2T10NJLF 10NH 5% - 250mA 0.42OHM 2.5GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	C1087 L1004	Inductor Multilayer,Chip	ELCH0004708	1005GC2T2N7SLF 2.7NH 0.3NH - 300mA 0.17OHM 5.5GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	C1088 L1002 L1025 L1032	Inductor Multilayer,Chip	ELCH0004709	1005GC2T3N3SLF 3.3NH 0.3NH - 300mA 0.19OHM 4.5GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	C1089 C1090	Inductor Multilayer,Chip	ELCH0004712	1005GC2T3N9SLF 3.9NH 0.3NH - 300mA 0.22OHM 4GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	C1103	Inductor Multilayer,Chip	ELCH0004713	1005GC2T6N8JLF 6.8NH 5% - 250mA 0.32OHM 3GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	L7000 L7001	Inductor Multilayer,Chip	ELCH0004717	1005GC2T82NJLF 82NH 5% - 150mA 2.1OHM 700MHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	C1002	Inductor Multilayer,Chip	ELCH0004720	1005GC2T1N2SLF 1.2NH 0.3NH - 300mA - - 0.12OHM 9GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	L1034	Inductor Multilayer,Chip	ELCH0004726	1005GC2T1N5SLF 1.5NH 0.3NH - 300mA 0.13OHM 7GHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	L1001 L1027 L9001	Inductor Multilayer,Chip	ELCH0004727	1005GC2TR10JLF 100NH 5% - 100mA 2.3OHM 600MHZ 8 SHIELD NONE 1.0X0.5X0.5MM R/TP PILKOR ELECTRONICS LTD.	
6	L4002 L4003	Inductor,Wire Wound,Chip	ELCP0008017	CIG21L2R2MNE 2.2UH 20% - 500mA 0.5 0.95 0.16OHM - - SHIELD 2X1.25X1MM NONE R/TP SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	L4000 L4001	Inductor,Wire Wound,Chip	ELCP0009409	LQM2HPN2R2MG0L 2.2UH 20% - 600mA 0.6 1.3 0.08OHM - - SHIELD 2.5X2X1MM NONE R/TP MURATA MANUFACTURING CO.,LTD.	
6	CN5000	Connector,BtoB	ENBY0034201	GB042-24S-H10-E3000 24P 0.40MM STRAIGHT SOCKET SMD R/TP 1M - LS Mtron Ltd.	
6	CN5001	Connector,BtoB	ENBY0036001	GB042-40S-H10-E3000 40P 0.4MM STRAIGHT SOCKET SMD R/TP 1M ENGINEERING PLASTIC UL94V-0 AU OVER NI LS Mtron Ltd.	
6	CN6000	Connector,BtoB	ENBY0051001	GB042-10S-H10-E3000 10P 0.4MM STRAIGHT FEMALE SMD R/TP 1M - LS Mtron Ltd.	
6	SW1000	Connector,RF	ENWY0008701	MS-156C NONE STRAIGHT SOCKET SMD T/REEL AU 50OHM 400mDB HIROSE KOREA CO.,LTD	
6	CN4001	Connector Terminal Block	ENZY0030401	KQ03LV-3R 3,2.5 mm,STRAIGHT,Gold,Twin One board 5.4mm HIROSE KOREA CO.,LTD	
6	R1022	Resistor,Chip	ERHY0000104	MCR01MZP5F49R9 49.9OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R1017 R4015	Resistor,Chip	ERHY0000105	MCR01MZP5F51R0 51OHM 1% 1/16W 1005 R/TP - ROHM.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	R4013	Resistor,Chip	ERHY0000140	MCR01MZP5F3602 36KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R8002 R8003 R8004 R8005 R8006	Resistor,Chip	ERHY0000147	MCR01MZP5F5602 56KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R6001 R6002 R6003 R6006 R6007	Resistor,Chip	ERHY0000254	MCR01MZP5J472 4.7KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R1014	Resistor,Chip	ERHY0003201	MCR01MZP5F1001 1KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R2003 R8010	Resistor,Chip	ERHY0003301	MCR01MZP5J101 100OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R1015 R2017	Resistor,Chip	ERHY0009501	MCR006YZPJ000 0OHM 5% 1/20W 0603 R/TP - ROHM.	
6	R3001 R3002 R3004 R3005 R3006 R3007	Resistor,Chip	ERHY0009527	MCR006YZPJ473 47KOHM 5% 1/20W 0603 R/TP - ROHM.	
6	R2012	Resistor,Chip	ERHY0035301	RC1005F4021CS 4.02KOHM 1% 1/16W 1005 R/TP - SAMSUNG ELECTRO-MECHANICS CO., LTD.	
6	R9008	Resistor,Chip	ERHZ0000203	MCR01MZP5F1002 10KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R6004	Resistor,Chip	ERHZ0000206	MCR01MZP5F10R0 10OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R1004	Resistor,Chip	ERHZ0000212	MCR01MZP5F1202 12KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R9001 R9002	Resistor,Chip	ERHZ0000243	MCR01MZP5F2201 2.2KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R3010	Resistor,Chip	ERHZ0000249	MCR01MZP5F22R0 22OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R8009 R8011 R8012	Resistor,Chip	ERHZ0000285	MCR01MZP5F4700 470OHM 1% 1/16W 1005 R/TP - ROHM.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	R4010 R8007	Resistor,Chip	ERHZ0000288	MCR01MZP5F4703 470KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	R2008	Resistor,Chip	ERHZ0000291	MCR01MZP5F49R9 49.9OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R7000 R7001	Resistor,Chip	ERHZ0000348	MCR01MZP5F12R0 12OHM 1% 1/16W 1005 R/TP - ROHM.	
6	R4018	Resistor,Chip	ERHZ0000401	MCR01MZSJ000 0OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R8008	Resistor,Chip	ERHZ0000402	MCR01MZP5J100 10OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R2009 R3011 R5000	Resistor,Chip	ERHZ0000406	MCR01MZP5J104 100KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R7002 R7003	Resistor,Chip	ERHZ0000407	MCR01MZP5J105 1MOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R1018 R1019	Resistor,Chip	ERHZ0000408	MCR01MZP5J111 110OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R1020 R4021 R4023	Resistor,Chip	ERHZ0000410	MCR01MZP5J120 12OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R1012 R1013	Resistor,Chip	ERHZ0000415	MCR01MZP5J131 130OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R8000 R8001	Resistor,Chip	ERHZ0000422	MCR01MZP5J153 15KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R7004	Resistor,Chip	ERHZ0000443	MCR01MZP5J222 2.2KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R4004	Resistor,Chip	ERHZ0000444	MCR01MZP5J223 22KOHM 5% 1/16W 1005 R/TP - ROHM.	
6	R1024 R1026	Resistor,Chip	ERHZ0000464	MCR01MZP5J331 330OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R1011	Resistor,Chip	ERHZ0000483	MCR01MZP5J470 47OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R3003 R3008 R3013	Resistor,Chip	ERHZ0000486	MCR01MZP5J473 47KOHM 5% 1/16W 1005 R/TP - ROHM.	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	R1006	Resistor,Chip	ERHZ0000509	MCR01MZP5J750 75OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R1007 R1008	Resistor,Chip	ERHZ0000517	MCR01MZP5J910 91OHM 5% 1/16W 1005 R/TP - ROHM.	
6	R4011	Resistor,Chip	ERHZ0000537	MCR01MZP5F6803 680KOHM 1% 1/16W 1005 R/TP - ROHM.	
6	X4000	Crystal	EXXY0026801	NX3215SA 32.768KHZ 20PPM 0F NONE SMD R/TP NIHON DEMPA KOGYO CO.,LTD.	
6	FL1002	Filter Duplexer,IMT	SDMY0003001	B7697 2140000000 2112.4 to 2167.6 1950000000 1922.4 to 1977.6 2.2 1.8 2.5x2.0x0.89 DUAL SMD R/TP - EPCOS PTE LTD.	
6	VA5000	Varistor	SEVY0001001	EVLC14S02050 14V 0% 50F 1.0*0.5*0.6 NONE SMD R/TP AMOTECH CO., LTD.	
6	VA6000 VA6001	Varistor	SEVY0004301	ICVL0518100Y500FR 18V 0% 10F 1.0*0.5*0.55 NONE SMD R/TP INNOCHIPS TECHNOLOGY	
6	FL9000	Filter Separator,FEM	SFAY0015501	AFEM-S102 2.1 25 0 connectivity for WCN1314 AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITED	
6	FB9001	Filter,Bead	SFBH0007103	BLM15BB750SN1D 75 ohm 1.0X0.5X0.5 25% 0.4 ohm 0.3A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	
6	FB7000 FB7001	Filter,Bead	SFBH0008102	BLM15HD182SN1D 1800 ohm 1.0X0.5X0.5 25% 2.2 ohm 0.2A SMD R/TP 2P 0 MURATA MANUFACTURING CO.,LTD.	
6	FL5000 FL5002 FL5003 FL5004 FL5005	Filter,EMI/Power	SFEY0010501	ICVE10184E150R101FR ESD/EMI 0HZ 15pF 0H SMD R/TP INNOCHIPS TECHNOLOGY	
6	FL4000	Filter,EMI/Power	SFEY0015301	NFM18PC104R1C3 ESD/EMI 0HZ 0.1uF 0H SMD R/TP MURATA MANUFACTURING CO.,LTD.	
6	FL5001	Filter,EMI/Power	SFEY0015901	ICMEF214P101MFR ICMEF214P101MFR ICMEF214P101MFR,SMD ,ESD Common mode Filter INNOCHIPS TECHNOLOGY INNOCHIPS TECHNOLOGY	

Level	LocationNo.	Description	PartNumber	Spec	Remark
6	FL4001	Filter,EMI/Power	SFEY0016301	ICMEF112P900M COMMON MODE NOISE FILTER 0HZ 0F 0H SMD R/TP INNOCHIPS TECHNOLOGY	
6	FL1005	Filter,Saw	SFSY0033404	B9444 1575.42MHz 1.4*1.1*0.45 SMD R/TP 5P EPCOS PTE LTD.	
6	FL1003	Filter,Saw	SFSY0035001	B9411 2140 1.4*1.1*0.45 SMD R/TP - EPCOS PTE LTD.	
6	FL1004	Filter,Saw	SFSY0035101	B9414 1950 1.4*1.1*0.45 SMD R/TP - EPCOS PTE LTD.	
6	U1004	IC,RF Amplifier	SMZY0025501	RF2815 3.3*2.1*1.0,FILTER+GPS LNA+FILTER MODULE,GPS, RF MICRO DEVICES INC	
6	SUMY00	Microphone Condenser	SUMY0010616	SUMY0010616 FPCB,dB,1.1TO10V, KNOWLES ACOUSTICS	
6	R7006	PCB ASSY MAIN,PAD OPEN	SAFO0000401	AX3100 ATL SV_SHIPBACK,MAIN,A,0OHM DNI	
6	R4007 R4014	Wire Pad,Open	SAFO0000501	AX3100 ATL SV_SHIPBACK,MAIN,A,0OHM_1005_DNI	
6	R1000 R1001 R2015 R4006 R4012 R4019 R4020 R4025 R9007 R9009	PCB ASSY MAIN,PAD SHORT	SAFP0000401	LG-LU3000 LGTBK,MAIN,A,	
5	SAD010000	Software,Mobile	SAD33355601	Base V09b - EUROPE QCT -	

13.3 Accessory

Note: This Chapterisused for reference,Part order is ordered by SBOM standard onGCSC

Level	LocationNo.	Description	PartNumber	Spec	Remark
2	AFN053800	Manual Assembly Operation	AFN75814501	LGE405.ACISBK ZZ:Without Color Manual assy for LGE405 CIS	
3	MBM062600	Card,Quick Reference	MBM63737501	PRINTING LGE405.ACISBK ZZ:Without Color Simple manual for LGE405 CIS	
3	MBM087200	Card,Warranty	MCDF0011303	COMPLEX GD350 CISBK ZZ:Without Color -	
2	EAC00	Rechargeable Battery Lithium Ion	EAC61679601	BL-44JN-WWU-LGC PRISMATIC 3.7V 1.5AH 300mAH 61x44x4.4 65x44x4.8 BLACK Bar type, Top cap Screw joint 444461, 1500mAh, Bar Type (Top cap screw joint), WW, Up LG Chem,LTD.	
2	MFL053800	Manual,Operation	MFL67584301	PRINTING LGE405.ACISBK ZZ:Without Color Web manual for LGE405 CIS	
2	EBX000000	Accessory,Data Cable	SGDY0016701	KCA-ET-8-0020 KCA-ET-8-0020 Micro USB, 1.2M KSD CO., LTD	
2	EAY060000	Adapters	SSAD0038301	100-240V,5060 Hz,5.1 V,700 mA,CE,AC-DC Adaptor,90Vac~264Vac,5.1V,700mA,5060,WALL 2P,USB,	